20 126531 Annexure B - iASK - Work Request - Results keyword clarity

Number	Created	Short description	Requester	Priority	State	Subcategory	Assignment group	Assigned to	Updated	Duration
WREQ0010267	07-12-2019 22:11:14	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	4 - Low	Closed Complete	Alerts	Datacom - DB SQL	s22(1)(a)(ii)	09-12-2019 10:23:06	130312
WREQ0010280	07-12-2019 22:11:35	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	4 - Low	Closed Complete	Alerts	Datacom - DB SQL	s22(1)(a)(ii)	09-12-2019 10:25:33	130438
WREQ0010319	08-12-2019 22:08:33	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	4 - Low	Closed Complete	Alerts	Datacom - DB SQL	s22(1)(a)(ii)	09-12-2019 10:32:29	44636
WREQ0010325	08-12-2019 22:08:42	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	4 - Low	Closed Complete	Alerts	Datacom - DB SQL	s22(1)(a)(ii)	09-12-2019 10:33:21	44679
WREQ0010367	09-12-2019 07:46:28	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	4 - Low	Closed Complete	Alerts	Datacom - DB SQL	s22(1)(a)(ii)	09-12-2019 10:07:37	8469
WREQ0010369	09-12-2019 07:46:30	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	4 - Low	Closed Complete	Alerts	Datacom - DB SQL	s22(1)(a)(ii)	09-12-2019 10:02:45	8175

WREQ0022825	20-03-2020 23:58:52	SQL Server Alert System: 'Severity 017' occurred on \\PVJDBT01\CLARITY	Alert Notifications	4 - Low	Closed Complete	Alerts	Datacom - DB SQL	s22(1)(a)(ii)	24-03-2020 09:24:21	293129
WREQ0024566	03-04-2020 10:34:00	CoreLogic's response to COVID-19: Clarity in uncertain times	Guest	4 - Low	Open		Operational Support QLD	s22(1)(a)(ii)	03-04-2020 10:34:00	0
WREQ0024567	03-04-2020 10:34:02	CoreLogic's response to COVID-19: Clarity in uncertain times	Guest	4 - Low	Open		Operational Support QLD	s22(1)(a)(ii)	03-04-2020 10:34:02	0
WREQ0029613	16-05-2020 03:17:13	SQL Server Alert System: 'Severity 017' occurred on \\PVJDBT01\CLARITY	Alert Notifications	4 - Low	Closed Complete	Alerts	Datacom - DB SQL	s22(1)(a)(ii)	18-05-2020 10:18:00	198047

20 126529 Annexure B - Helpmaster - Log of Jobs-Issues - Clarity CA PPM - 1-7-2018 Onwards

Job Search

Job Number	Primary Client	Priority	Contact Type	Job Type	Issue	Details	Assigned To
376233	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Corporate > Software	From: s 22(1)(a)(ii) Received: Monday, 2 July 2018 9:48 AM To: ACIC Service Desk Subject: Access to Clarity User Guides [SEC=UNCLASSIFIED] UNCLASSIFIED Good morning, As discussed with s , could you assist get the access to view/edit Clarity User Guides, placed at the following location please? http://ctinet/teams/epmo/_layouts/AccessDenied.aspx?Source=http%3A%2F%2Fctinet%2Fteams%2Fepmo%2FPages%2FUserGuides%2Easpx&Type=list&name=%7B7D6D4F4F%2D9D2F%2D40AD%2DBD31%2DF8395DDC2D96%7D Currently this page displays "Error: Access denied." Message. Should you require more information, please let me know. Thanks and regards, s 22(1)(a)(ii) Follow us:	s22(1)(a)(ii)
376385	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Enterprise	From: s 22(1)(a)(ii) Received: Tuesday, 3 July 2018 9:29:31 AM To: ACIC Service Desk Subject: FW: Change 375313 [SEC=UNCLASSIFIED] Hello, Please remove any/all special backups taken on PVJDBP01 (Clarity Production) from F:\SQLBackups\Adhoc directory. Prior to the upgrade this Thursday, a backup of the database will be taken that should suffice the need, in case of a restore required post-upgrade. Thanks and regards, s 22(1)(a)(ii) Follow us: The ACIC acknowledges the traditional custodians and we pay our respects to Elders past, present and future. We recognise and celebrate their culture, connection to land, water and community. From: s 22(1)(a)(ii) Subject: Change 375313 [SEC=UNCLASSIFIED]	s22(1)(a)(ii)
376796	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Corporate > Software	From: s 22(1)(a)(ii) Received: Wednesday, 4 July 2018 1:10:40 PM To: ACIC Service Desk Subject: FW: User Experience Test - entering Key deliverables in Clarity [SEC=UNCLASSIFIED] This is the issue s raised. Can you please look into this for me? Many thanks s 22(1)(a)(ii) Follow us: The ACIC acknowledges the traditional custodians and we pay our respects to Elders past, present and future. We recognise and celebrate their culture, connection to land, water and community. From: s 22(1)(a)(ii) Sent: Wednesday, 4 July 2018 12:10 PM To: s 22(1)(a)(ii) Subject: RE: User Experience Test - entering Key deliverables in Clarity [SEC=UNCLASSIFIED] Hi s 22(1)(a)(ii)	s22(1)(a)(ii)

376863	s22(1)(a)(ii)	4 (Low)	Email	Service Request	Corporate > Software > Clarity	From: s 22(1)(a)(ii) Received: Wednesday, 19 April 2023 1:05:32 PM To: ACIC Service Desk Subject: Request to add decision values in Clarity [SEC=UNCLASSIFIED] Hi s 22(1)(a)(ii) Can you please add the following decisions into the Lookup: Decision – Values in Clarity for the Governance Decisions page? 1 – Agreed 2 – Noted Many thanks again! s 22(1)(a)(ii) Follow us: The ACIC acknowledges the traditional custodians and we pay our respects to Elders past, present and future. We recognise and celebrate their culture, connection to land, water and community.	s22(1)(a)(ii)
377682	s22(1)(a)(ii)	5 (Scheduled)	Email	Service Request	Business > NSS > Customer Enquiries > Terms of Service Enquiries (incl IC & ID enquiries)	s 22(1)(a)(ii) We are proud to be a corporate member of	s22(1)(a)(ii)
378416	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Enterprise > Facilities and Data Centres	s 22(1)(a)(ii)	s22(1)(a)(ii)

378628	s22(1)(a)(ii)	5 (Scheduled)	Email	Service Request	Business > NSS > Customer Enquiries > Other	s 22(1)(a)(ii) s 22(1)(a)(ii) s 22(1)(a)(ii)	s22(1)(a)(ii)
378679	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Enterprise > Servers	From: Sent: Friday 13/07/2018 4:14:26 PM To: Subject: RQ (CT 1334845) - Decommission PVPRJD02 and PVPRJT02 [SEC=UNCLASSIFIED] UNCLASSIFIED Hi [redacted], absence I think this might become yours.... :) Sent: Friday, 13 July 2018 4:01 PM To: Subject: RQ (CT 1334845) - Decommission PVPRJD02 and PVPRJT02 [SEC=UNCLASSIFIED] Hi [redacted], Please decommission the old Clarity Dev boxes as follows: PVJASB01 – Old DEV Report Server PVPRJD01 – Old DEV Application server PVPRJD02 – Old DEV DB server	s22(1)(a)(ii)
379184	s22(1)(a)(ii)	3 (Medium)	Email	Change Management Record	Enterprise > Virtualisation	Summary: The following old Clarity Development Servers (VMs) are not needed anymore and should be decommissioned PVJASD01 – Old DEV Report Server PVPRJD01 – Old DEV Application server PVPRJD02 – Old DEV DB server Reason: To release vCenter Compute Resources. Related Record(s): CT378679 Customer(s) Affected: None Details/Notes: The VMs will be turned off for 7 days then deleted from vCenter.	s22(1)(a)(ii)

379796	s22(1)(a)(ii)	5 (Scheduled)	Email	Service Request	Business > NSS > Customer Enquiries > Terms of Service Enquiries (incl ID & ID enquiries)	From: s 22(1)(a)(ii) Received: Thursday, 29 July 2021 4:13:26 PM To: s 22(1)(a)(ii) Subject: Updated consent form Hi (ii) Can I please have a copy of the most recent informed consent form that you provide? Thanks Regards s 22(1)(a)(ii) We are proud to be a corporate member of	s22(1)(a)(ii)
379815	s22(1)(a)(ii)	5 (Scheduled)	Email	Service Request	Business > NSS > Check Processing > NPHC Clarification/Legislation/Result Discrepancy	s 22(1)(a)(ii) s 22(1) (a)(ii)	s22(1)(a)(ii)
379899	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Business > NSS	From: s 22(1)(a)(ii) Received: Friday, 30 July 2021 8:31:11 AM s 22(1) (a)(ii) s 22(1)(a)(ii)	s22(1)(a)(ii)

380049	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Business > [redacted]	[redacted] s 22(1)(a)(ii) s 22(1)(a)(ii) [redacted] s,	s22(1)(a)(ii)
380535	s22(1)(a)(ii)	3 (Medium)	Telephone	Service Request	Corporate > Software > Clarity	Purpose: Clarity will be upgraded to version 15.3 for which the current DB server (pvjdbp01) will not be compatible. The specifications are as under: Environment: Production Security Zone: crimtracagency.corporate Microsoft SQL Server 2014 Enterprise Edition: Service Pack 2 or higher Three databses are needed: one for the Application Server, second for the Reporting Server and third for the Data warehouse. SQL 2014 Enterprise Core Edition Sp2. set SQL max server memory set to 6144 Set COLLATION to SQL_Latin1_General_CP1_CI_AS at the entire Server level ========== >>>>>>>>>> . CLARITY: >>>>>>>>>> Set up valid login credentials for CA PPM. The login name = Clarity and password is communicated to the DBA. (Grant the clarity logon (including password) on production server migrated from PVJDBP01 to the new server.) Import the database latest backup image from PVJDBP01 and restore in on this new server as Clarity. (This is still a building phase, not go-live) Set the Microsoft SQL Server Database Schema name as niku. This name must be the Default Schema for the login user Clarity. Associate the imported database with your SQL server security user by running the following pl/sql as the sa user: USE Clarity ALTER USER niku WITH LOGIN=Clarity GRANT VIEW SERVER STATE to clarity Database user roles = db_owner The database user Clarity must be able to alter the CA PPM-schema and otherwise own the database. ALTER DATABASE Clarity SET READ_COMMITTED_SNAPSHOT ON GRANT VIEW SERVER STATE to niku REMOTE QUERY TIMEOUT sp_configure 'remote query timeout',0 reconfigure with override	s22(1)(a)(ii)
380594	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Corporate > Software > Clarity	From: [redacted] s 22(1)(a)(ii) Received: Tuesday, 25 July 2017 4:31:19 PM To: [redacted] Service Desk Subject: Request to be added to projects in Clarity [SEC=UNCLASSIFIED] Hi [redacted] When you get a chance, can you please add me as a participant with collaboration rights for the following projects in Clarity? · [redacted] · Access Network Capability and Consolidation - Team – Participants · Database and Storage Consolidation - Oracle - Team – Participants · Database and Storage Consolidation - Storage - Team – Participants · End User Compute (Desktop SOE Refresh) - Team – Participants · Service Management Toolset - Team – Participants – only Andrew has access to this · TRIM Consolidation Project - Team – Participants · TRIM Consolidation Project - Team - Participants Many thanks [redacted] s 22(1)(a)(ii) Follow us: The ACIC acknowledges the traditional custodians and we pay our respects to Elders past, present and future. We recognise and celebrate their culture, connection to land, water and community.	s22(1)(a)(ii)

380606	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Corporate > Software	From: s 22(1)(a)(ii) Received: Tuesday, 31 July 2018 3:03:23 PM To: Service Desk Subject: Email address amendments in Clarity [SEC=UNCLASSIFIED] Hi Can you please advise how I am able to amend the email address section of an existing user in Clarity? For instance, I need to amend email address to Thanks! Follow us: The ACIC acknowledges the traditional custodians and we pay our respects to Elders past, present and future. We recognise and celebrate their culture, connection to land, water and community.	s22(1)(a)(ii)
380937	s22(1)(a)(ii)	5 (Scheduled)	Email	Service Request			s22(1)(a)(ii)
382081	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Corporate	s 22(1)(a)(ii) Received: Tuesday, 6 August 2019 8:24:55 AM To: ACIC Service Desk Subject: Delete Skill Group [SEC=UNCLASSIFIED] UNCLASSIFIED Hi Service Desk, Can you please delete the Application Support – Unassigned HM queue. Moving forward can the service desk assign ACIC online and ACC-A jobs to the Application Support – Business queue All SAP and Clarity (COTS) to the Application Support – Corporate queue Please let me know if you have any questions. Follow us:	s22(1)(a)(ii)
382146	s22(1)(a)(ii)	5 (Scheduled)	Email	Service Request		s 22(1)(a)(ii) s 22(1)(a)(ii)	s22(1)(a)(ii)

382181	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Corporate > Software > Clarity	[redacted] s22(1)(a)(ii) Sent: Tuesday, 30 July 2019 1:34:39 PM To: [redacted] Service Desk Subject: Clarity attributes [SEC=UNCLASSIFIED] Hi [redacted] As mentioned yesterday, I need to have a column for the 'assignee' to be displayed in the Task list of the PMO Activities - Monthly Achievements (pr-0864) in Clarity. Is there anyway that you can action this at your earliest convenience, as we need to run a report on all assignees against the respective tasks? Many thanks [redacted] Follow us: The ACIC acknowledges the traditional custodians and we pay our respects to Elders past, present and future. We recognise and celebrate their culture, connection to land, water and community.	s22(1)(a)(ii)
382213	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Corporate > Software > Clarity	[redacted] s22(1)(a)(ii) Received: Tuesday, 30 July 2019 2:44:16 PM To: [redacted] Service Desk Subject: Clarity clean up [SEC=UNCLASSIFIED] Hi [redacted] I've spotted a few references to CrimTrac in PROD via Home > Resource Management > Resources page as below I've also noticed that the Department OBS is still CrimTrac – see far below – is it possible to change this to the usual OBS we have against projects? Thanks [redacted] Follow us: The ACIC acknowledges the traditional custodians and we pay our respects to Elders past, present and future. We recognise and celebrate their culture, connection to land, water and community.	s22(1)(a)(ii)
382220	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Corporate > Software > Clarity	[redacted] s22(1)(a)(ii) Received: Tuesday, 31 July 2019 9:42:50 PM To: [redacted] Service Desk Subject: Clarity attribute - #2 [SEC=UNCLASSIFIED] Hi [redacted] Sorry to inundate you with so many requests today J, but I've one more…. Is it possible to add a filter to search against 'Assignee' in the window below? Thanks [redacted] Follow us: The ACIC acknowledges the traditional custodians and we pay our respects to Elders past, present and future. We recognise and celebrate their culture, connection to land, water and community.	s22(1)(a)(ii)

382591	s22(1)(a)(ii)	5 (Scheduled)	Email	Service Request	s 22(1)(a)(ii)	From: s 22(1)(a)(ii)	s22(1)(a)(ii)
382729	s22(1)(a)(ii)	5 (Scheduled)	Email	Service Request	s 22(1)(a)(ii)		s22(1)(a)(ii)
385196	s22(1)(a)(ii)	5 (Scheduled)	Email	Service Request	s 22(1)(a)(ii)		s22(1)(a)(ii)

385286	s22(1)(a)(ii)	5 (Scheduled)	Email	Service Request	s 22(1)(a)(ii)		s22(1)(a)(ii)
385290	s22(1)(a)(ii)	5 (Scheduled)	Email	Service Request	s 22(1)(a)(ii)		s22(1)(a)(ii)
386303	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Corporate > Software	From: s 22(1)(a)(ii) Received: Tuesday, 23 August 2016 4:25:06 PM To: ACIC Service Desk Subject: FOR ACTION: request to amend CA PPM [SEC=UNCLASSIFIED] Hi s 22(1)(a)(ii) As mentioned earlier, can you please amend Clarity as per my requests below? 1. Project > Properties > Exception Reports page · When creating a new entry re an Exception Report, please remove the uploading of the Exception Report field capability and replace with a manual entry text field to allow for entering TRIM ref for the Exception Report. 2. Please amend the Project Management – Ctrac Group access to include the Governance Decisions – Edit all. Once amended, I am assuming that all users with the Project Management – Ctrac access would automatically have their access updated. 3. Please update the title of the Group Project Management – Ctrac – to read Project Management only. Happy to clarify s 22(1)(a)(ii) Follow us:	s22(1)(a)(ii)

386513	s22(1)(a)(ii)	4 (Low)	Email	Service Request	Corporate > Software > Clarity	From: [redacted] Sent: Thursday 23/08/2018 2:06:38 PM To: [redacted] Subject: FOR ACTION: access to Business Enabling Project (BEP) in Clarity (Pr-0778) [SEC=UNCLASSIFIED] Hi [redacted] When you get a chance today, can you please add me as a participant & collaboration manager against the BEP project in Clarity? Also, is it available to run a query to identify whether there are other projects I am not included as collaboration manager? Many thanks [redacted] Follow us: The ACIC acknowledges the traditional custodians and we pay our respects to Elders past, present and future. We recognise and celebrate their culture, connection to land, water and community.	s22(1)(a)(ii)
387381	s22(1)(a)(ii)	2 (High)	RFC	Change Management Record	Corporate > Software > Clarity	Summary: Existing Clarity version 14.3 environment will be moved to a new set of servers. Reason: In order to run the supportable version of PPM tool, the infrastructure needs to be on the compatible level. Risk: The version of Clarity (v14.3) in the existing production environment will run on the new set of VMs. Related Record(s):	s22(1)(a)(ii)
387750	s22(1)(a)(ii)	5 (Scheduled)	Email	Service Request	Business > [redacted]	[redacted]	s22(1)(a)(ii)
388042	s22(1)(a)(ii)	4 (Low)	Email	Service Request	Corporate > Software > Clarity	From: [redacted] s 22(1)(a)(ii) Received: Monday, 3 September 2018 1:48:59 PM To: [redacted] ;Service Desk Subject: For Action: Clarity Access issues [SEC=UNCLASSIFIED] Hi [redacted] [redacted] is listed as a collaboration manager in Frontline Reference (Pr-0898) in Clarity, but is unable to add tasks in the Tasks tab. She doesn't have the 'New' or 'Delete' button visible at the bottom of the task list page. I've checked her access rights in Resources, but can't see what the issue is. Could you please check what the issue could be? Many thanks [redacted] Follow us: The ACIC acknowledges the traditional custodians and we pay our respects to Elders past, present and future. We recognise and celebrate their culture, connection to land, water and community.	s22(1)(a)(ii)
388045	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Corporate > Software	From: [redacted] s 22(1)(a)(ii) Received: Monday, 3 September 2018 3:03:52 PM To: [redacted] ;Service Desk Subject: Clarity - Program [SEC=UNCLASSIFIED] Hi [redacted] I had created a program in Clarity from the templates but when I open the created investment (Pr-0899) it looks very different in the page layout to the normal programs I had created earlier. Can you please call me when you get a chance to confirm where I could add the updates of this Program? We used to have the Overall Status comment field on the landing page of the investment, but not on this one. Happy to clarify Thanks [redacted] Follow us: The ACIC acknowledges the traditional custodians and we pay our respects to Elders past, present and future. We recognise and celebrate their culture, connection to land, water and community.	s22(1)(a)(ii)

388355	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Corporate > Software > Clarity	From: s 22(1)(a)(ii) Received: Wednesday, 5 September 2018 9:04:58 AM To: Service Desk Subject: Clarity - Resources in Tasks [SEC=UNCLASSIFIED] Hi [redacted] I recall having highlighted this issue to you earlier, but grateful if you could lok into the matter for me. Basically, it would be nice to have the 'Assignees' listed in the available columns list within the List Column Layout in configure of the Tasks tab. Are you able to help on this? Thanks [redacted] Follow us: The ACIC acknowledges the traditional custodians and we pay our respects to Elders past, present and future. We recognise and celebrate their culture, connection to land, water and community.	s22(1)(a)(ii)
388449	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Corporate > Software > Clarity	From: s 22(1)(a)(ii) Received: Wednesday, 5 September 2018 1:56:51 PM To: Service Desk Subject: Clarity - Task titles [SEC=UNCLASSIFIED] Hi [redacted] Rather than deleting and starting again, is there a way to amend the title of an entered Task in Clarity? Eg., I need to update a misspelt word in its title. Thanks [redacted] Follow us: The ACIC acknowledges the traditional custodians and we pay our respects to Elders past, present and future. We recognise and celebrate their culture, connection to land, water and community.	s22(1)(a)(ii)
388629	s22(1)(a)(ii)	5 (Scheduled)	Email	Service Request	Business > [redacted]	s 22(1)(a)(ii) [redacted]	s22(1)(a)(ii)
389057	s22(1)(a)(ii)	3 (Medium)	RFC	Change Management Record	Corporate > Software > Clarity	Summary*: The current version 14.3 is not supported Reason: Get the environment to a supportable version Related Record(s): This change is the last leg and would complete the Clarity upgrade activities to bring it to a supportable version.	s22(1)(a)(ii)

389881	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Enterprise > Servers	From: s 22(1)(a)(ii) Received: Tuesday, 4 September 2018 3:59:41 PM To: ACIC Service Desk Subject: decommision old Clarity TEST environment [SEC=UNCLASSIFIED] UNCLASSIFIED Hello Please feel free to decommission old Clarity TEST environment comprised of following Servers: Old Clarity Application Server = PVPRJT01 Old Clarity Database server = pvprjt02 Old Clarity Report server = pvjast01 Should you have any question, please do not hesitate to contact me. Thanks and regards, s 22(1)(a)(ii) Follow us: The ACIC acknowledges the traditional custodians and we pay our respects to Elders past, present and future. We recognise and celebrate their culture, connection to land, water and community.	s22(1)(a)(ii)
390623	s22(1)(a)(ii)	3 (Medium)	Email	Change Management Record	Enterprise > Servers	Summary: The following Clarity servers are not required any more and should be decommissioned. Old Clarity Application Server = PVPRJT01 Old Clarity Database server = pvprjt02 Old Clarity Report server = pvjast01 Reason: Test servers not required any more for testing Related Record(s):CT389881 Customer(s) Affected: None	s22(1)(a)(ii)
391742	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Enterprise > Database > SQL	s 22(1)(a)(ii) Received: Thursday, 20 September 2018 8:22:00 AM To: ACIC Service Desk Subject: MSSQL Pvjdbd01\Clarity review memory [SEC=UNCLASSIFIED] UNCLASSIFIED Good Morning Service Desk, Please raise a lower priority request and assign to Datacom Database s 22(1)(a)(ii) to investigate memory on Pvjdbd01\Clarity (development box). Kind regards s 22(1)(a)(ii) Follow us: The ACIC acknowledges the traditional custodians and we pay our respects to Elders past, present and future. We recognise and celebrate their culture, connection to land, water and community. Please note that this email is an ACIC record subject to Commonwealth record retention requirements, legislative obligations of non-disclosure and that officers are bound by the ACIC Information Security Policy.	s22(1)(a)(ii)
391870	s22(1)(a)(ii)	5 (Scheduled)	Email	Service Request	Business > s 22(1)(a)(ii)	(b) (1) (A)	s22(1)(a)(ii)

391972	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Corporate > Software > Clarity > Access Requests	[redacted] s 22(1)(a)(ii) Sent: Friday, 28 September 2018 10:10:12 AM [redacted] /Service Desk Subject: Clarity - collaboration manager access request [SEC=UNCLASSIFIED] Hi [redacted] s 22(1)(a)(ii) Can you please add me as the collaboration manager in the Firearm Program Proposal project. Thanks PS: are you able to run a query on all the active investments we have in Clarity where I may not a collaboration manager? [redacted] s 22(1)(a)(ii) Follow us: The ACIC acknowledges the traditional custodians and we pay our respects to Elders past, present and future. We recognise and celebrate their culture, connection to land, water and community.	s22(1)(a)(ii)
392697	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Enterprise > Database	[redacted] s 22(1)(a)(ii) Received: Tuesday, 25 September 2018 2:03:49 PM To: ACIC Service Desk Subject: MSSQL PVJDBD01\Clarity Dev server SQL patching [SEC=UNCLASSIFIED] UNCLASSIFIED Good Afternoon Service Desk, Please raise a low priority request and assign to Datacom Database [redacted] to patch PVJDBD01\Clarity to the latest SQL patch level. This is a development box so a Change Request is not required. The application team have been advised and are happy for this work to occur. Kind regards,[redacted] s 22(1)(a)(ii) Follow us: The ACIC acknowledges the traditional custodians and we pay our respects to Elders past, present and future. We recognise and celebrate their culture, connection to land, water and community. Please note that this email is an ACIC record subject to Commonwealth record retention requirements, legislative obligations of non-disclosure and that officers are bound by the ACIC Information Security Policy.	s22(1)(a)(ii)
393452	s22(1)(a)(ii)	4 (Low)	Telephone	Service Request	Corporate > Access Management > Distribution List	From: Diversity Sent: Friday 28/09/2018 1:06:48 PM To: ACIC Service Desk Subject: all staff mailing list [DLM=For-Official-Use-Only] Hi Team, I don't seem to be getting any all staff emails. My Manager has advised I need to contact your team to have the mailing list updated. Hopefully you can assist. Thank you Kind regards [redacted] s 22(1)(a)(ii) Follow us: The ACIC acknowledges the traditional custodians and we pay our respects to Elders past, present and future. We recognise and celebrate their culture, connection to land, water and community.	s22(1)(a)(ii)

394946	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Corporate	From: s 22(1)(a)(ii) Received: Wednesday, 10 October 2018 8:56:41 AM To: ACIC Service Desk Subject: Old Clarity Production database [SEC=UNCLASSIFIED]Hi C UNCLASSIFIED Good morning [redacted] Could you make old clarity database pvjdbp01/clarity writable please? I need to verify the status of a Clarity job (Time slicing) in the old environment and whether it is similar to the one in current production environment. Following this, [redacted] you know when to decommission this DB and the VM. Thank you. s 22(1)(a)(ii) Follow us: The ACIC acknowledges the traditional custodians and we pay our respects to Elders past, present and future. We recognise and celebrate their culture, connection to land, water and community.	s22(1)(a)(ii)
395873	s22(1)(a)(ii)	5 (Scheduled)	Email	Service Request	Business > [redacted] s 22(1)(a)(ii)	s 22(1)(a)(ii) [redacted]	s22(1)(a)(ii)
395895	s22(1)(a)(ii)	5 (Scheduled)	Email	Service Request	Business > [redacted] s 22(1)(a)(ii)	[redacted]	s22(1)(a)(ii)

401004	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Corporate > Software > Clarity > Infrastructure	From: s 22(1)(a)(ii) Received: Tuesday, 15 November 2016 10:39:27 AM To: ACIC Service Desk Subject: a child ticket for 400124. [SEC=UNCLASSIFIED] UNCLASSIFIED Hello The database Clarity_OOTB created as per ticket #400124, DB user Clarity cannot access the tables without "niku." Prefix. Could you change permissions/ownership of the database so that user Clarity can access Clarity_OOTB database on server PVJDBD01 please? Thanks and regards, s [redacted] 2 [redacted] 2 [redacted] Follow us: (The ACIC acknowledges the traditional custodians and we pay our respects to Elders past, present and future. We recognise and celebrate their culture, connection to land, water and community. 1)	s22(1)(a)(ii)
401197	s22(1)(a)(ii)	3 (Medium)	RFC	Change Management Record	Enterprise > Virtualisation	Summary: Migrate the following VMs from "PDC - Streamed – NotReplicated" datastore cluster to "SDC - Streamed - NotReplicated" datastore cluster. AFIN - Pilot Database Server - PVDDBD01 AFIN - Pilot Test Database Server - PVDDBT01 AFIN XINT - Database - PVDDBX01 AFIN - Training Database server1 - PVDDBE01 AFIN - Training Database server 2 - PVDDBE02 MSAC - CA SiteMinder - PVBSST05 MSAC - CA SiteMinder - PVBSST06 SiteMinder Secure-Proxy Server - Test - PVBSST03 SiteMinder Secure-Proxy Server - Test - PVBSST04 AFIN Xint Database - PVDDBX02 Extranet - SQL Test - PVHDBT01 Clarity - DataBase - Dev - PVJDBD01 Infrastructure - DataBase - Dev - PVCDBD29 Finance - GP DB SERVER TEST - PVFMS004 JIRA and Crucible - SQL Cluster - PVCDBD01 Infrastructure - DataBase - Test - PVCDBT30 Intranet - POC Migration - PVFWSS03 Aurion - HR Database Development - PVCDBD02 Infrastructure - DEV Database Server - PVCDBD03 Application Messaging Training - PVTAME01 Reason: To release the RAM usage stress that PDC vCenter cluster is facing. Related Record(s): N/A (	s22(1)(a)(ii)
403203	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Enterprise > Servers	From: s 22(1)(a)(ii) Received: Wednesday, 28 November 2018 11:44:15 AM To: ACIC Service Desk Subject: decommision Old Clarity environment [SEC=UNCLASSIFIED] UNCLASSIFIED Hello Please feel free to decommission old Clarity environments comprised of following Servers: Old Clarity Prod Application Server = pvjasp01 Old Clarity Prod Database server = pvjdbp01 Old Clarity Prod Report server = pvjasp02 Please refer to the attached email from the PMO and confirm that the requirements are met prior to any deletions. Should you have any question, please do not hesitate to contact me. Thanks and regards, s [redacted] 2 [redacted] 2 [redacted] Follow us: (	s22(1)(a)(ii)
403453	s22(1)(a)(ii)	4 (Low)	RFC	Change Management Record	Enterprise > Database > SQL	Summary": MSSQL PVJDBP01 Decommission Legacy Clarity databases (BusinessObjects, Clarity) will be taken offline for one week and subsequently decommissioned. A backup will be taken in the event the database needs to be recovered. Reason:These have been identified as legacy databases by the client that are no longer required (Clarity has been upgraded to new infrastructure). Related Record(s):382736, 403203	s22(1)(a)(ii)
403709	s22(1)(a)(ii)	3 (Medium)	Email	Change Management Record	Enterprise > Servers	Summary: The following Clarity servers are not required any more and should be decommissioned.) Old Clarity Prod Application Server = pvjasp01 Old Clarity Prod Database server = pvjdbp01 Old Clarity Prod Report server = pvjasp02 (3 Reason: Clarity environment has been upgraded and migrated on new Infrastructure Related Record(s):CT403203) Customer(s) Affected: None (i i)	s22(1)(a)(ii)

404617	s22(1)(a)(ii)	4 (Low)	In-Person	Service Request	Corporate > Software > Clarity	[redacted] required new version of clarity uploaded to a server (PVJast02). files scanned and uploaded	s22(1)(a)(ii)
404735	s22(1)(a)(ii)	3 (Medium)	Email	Service Request	Corporate > Software > Clarity > Infrastructure	From: [redacted] Sent: Wednesday, 5 December 2018 3:07:46 PM To: ACIC Service Desk Subject: backup of Clarity TEST databases needed [SEC=UNCLASSIFIED] UNCLASSIFIED Hello Can I request you take a full back up of the following databases from PVJDBT01 server? 1. Clarity_PT 2. PPM_DWH 3. PPM_Jaspersoft Please let me know as soon as they are taken. Thanks and regards, [redacted] Follow us: The ACIC acknowledges the traditional custodians and we pay our respects to Elders past, present and future. We recognise and celebrate their culture, connection to land, water and community.	s22(1)(a)(ii)
404803	s22(1)(a)(ii)	4 (Low)	Email	Service Request	Enterprise > Backup and Recovery	From: [redacted] Sent: Thursday 6/12/2018 8:27:14 AM To: ACIC Service Desk Subject: RE: backup of Clarity TEST databases needed [SEC=UNCLASSIFIED] UNCLASSIFIED Please remove the following special backups that were taken in the past from the PVJDBT01 database server. Ticket numbLast modified date Dwh_mssql_base 15/09/2015 mssql_base15/09/2015 Santized_14_3.bak22/01/2018 345437Dwh_mmsql_base25/08/2017 Kind regards, [redacted] Please note that this email is an ACIC record subject to Commonwealth record retention requirements, legislative obligations of non-disclosure and that officers are bound by the ACIC Information Security Policy.	s22(1)(a)(ii)

s22(1)(a)(ii)
s22(1)(a)(ii)
s22(1)(a)(iii)
s22(1)(a)(iii)

20 126529 Annexure B - Helpmaster - Log of Jobs-Issues - Clarity CA PPM - 1-7-2018 Onwards

Number	Opened	Short description	Caller	Priority	State	Category	Subcategory	Service	Assignment group	Assigned to	Updated	Updated by	Active	Urgency	Impact	Created by
INC0023452	20-03-2019 11:48:17	Is gender clarity required for CHC applicant	AHPRA Generic Email	5 - Planning	Closed	National Police Checking	Customer Enquiries		NPCS - Service Delivery	s22(1)(a)(ii)	25-03-2019 15:00:00	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)
INC0013577	09-01-2019 11:24:24	Clarity - Access Issues	s22(1)(a)(ii)	5 - Planning	Closed	Request/Enquiry	Software	PPM/Clarity [PROD]	Technical Services	s22(1)(a)(ii)	15-01-2019 15:00:02	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)
INC0057936	04-10-2019 09:49:17	FW: Access Request - PPM Clarity (Enterprise Project Management Tool)	s22(1)(a)(ii)	5 - Planning	Cancelled	Request/Enquiry	Access Management	PPM/Clarity [PROD]	Service Desk	s22(1)(a)(ii)	20-11-2019 17:41:14	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)
INC0052826	07-09-2019 09:31:47	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	09-09-2019 09:30:45	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0052098	04-09-2019 07:48:11	SQL Server Alert System: 'Severity 020' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	04-09-2019 09:53:43	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0067993	24-11-2019 22:08:50	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	25-11-2019 10:22:37	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0068598	26-11-2019 22:13:18	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	29-11-2019 10:04:21	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0050845	29-08-2019 07:10:56	SQL Server Alert System: 'Severity 020' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	29-08-2019 11:31:32	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0069338	01-12-2019 13:45:41	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	02-12-2019 13:37:03	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0059615	14-10-2019 22:11:09	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	21-10-2019 13:00:00	system	FALSE	3 - Low	3 - Low	guest
INC0043517	22-07-2019 12:52:51	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - Backup & Storage	s22(1)(a)(ii)	27-07-2019 15:00:01	system	FALSE	3 - Low	3 - Low	guest

INC0068884	27-11-2019 22:10:36	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	29-11-2019 10:04:21	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0067948	23-11-2019 15:50:25	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	25-11-2019 10:22:37	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0048426	16-08-2019 17:42:49	SQL Server Alert System: 'Severity 020' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	25-08-2019 13:00:07	system	FALSE	3 - Low	3 - Low	guest
INC0043620	22-07-2019 16:43:04	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - Backup & Storage	s22(1)(a)(ii)	29-07-2019 18:00:04	system	FALSE	3 - Low	3 - Low	guest
INC0043334	20-07-2019 09:22:55	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - Backup & Storage	s22(1)(a)(ii)	27-07-2019 15:00:01	system	FALSE	3 - Low	3 - Low	guest
INC0043805	23-07-2019 10:42:01	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - Backup & Storage	s22(1)(a)(ii)	29-07-2019 18:00:05	system	FALSE	3 - Low	3 - Low	guest
INC0046123	04-08-2019 08:53:57	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	10-08-2019 11:00:03	system	FALSE	3 - Low	3 - Low	guest
INC0068275	25-11-2019 22:07:50	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	26-11-2019 09:53:45	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0049995	26-08-2019 07:11:16	SQL Server Alert System: 'Severity 020' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	26-08-2019 11:13:50	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0066762	18-11-2019 22:08:58	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	19-11-2019 16:34:17	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest

INC0043674	23-07-2019 06:28:59	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - Backup & Storage	s22(1)(a)(ii)	29-07-2019 18:00:05	system	FALSE	3 - Low	3 - Low	guest
INC0048462	17-08-2019 07:46:57	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	25-08-2019 11:00:04	system	FALSE	3 - Low	3 - Low	guest
INC0041238	09-07-2019 12:32:12	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - Backup & Storage	s22(1)(a)(ii)	27-07-2019 15:00:02	system	FALSE	3 - Low	3 - Low	guest
INC0049848	24-08-2019 00:22:31	SQL Server Alert System: 'Severity 017' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	03-09-2019 14:00:04	system	FALSE	3 - Low	3 - Low	guest
INC0068276	25-11-2019 22:10:08	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	26-11-2019 09:53:45	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0070612	05-12-2019 13:47:39	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	06-12-2019 08:47:07	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0042192	13-07-2019 01:19:19	SQL Server Alert System: 'Severity 017' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	24-07-2019 16:00:03	system	FALSE	3 - Low	3 - Low	guest
INC0049993	26-08-2019 07:11:14	SQL Server Alert System: 'Severity 020' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	26-08-2019 11:13:51	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0050846	29-08-2019 07:10:57	SQL Server Alert System: 'Severity 020' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	29-08-2019 11:31:33	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0061315	22-10-2019 22:17:37	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	23-10-2019 10:46:49	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest

INC0065578	12-11-2019 22:16:53	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	13-11-2019 11:02:51	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0051271	31-08-2019 17:41:54	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	03-09-2019 14:15:27	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0068604	26-11-2019 22:13:23	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	29-11-2019 10:04:23	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0069302	30-11-2019 13:50:04	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	02-12-2019 13:37:04	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0049888	24-08-2019 15:04:35	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	31-08-2019 12:00:03	system	FALSE	3 - Low	3 - Low	guest
INC0042178	12-07-2019 19:38:01	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	22-07-2019 19:00:01	system	FALSE	3 - Low	3 - Low	guest
INC0046080	03-08-2019 17:23:00	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	10-08-2019 11:00:05	system	FALSE	3 - Low	3 - Low	guest
INC0062044	26-10-2019 22:21:03	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	28-10-2019 10:06:20	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0067376	20-11-2019 22:11:43	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	27-11-2019 12:00:03	system	FALSE	3 - Low	3 - Low	guest
INC0065737	13-11-2019 13:57:02	SQL Server Alert System: 'Severity 017' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	18-11-2019 15:00:02	system	FALSE	3 - Low	3 - Low	guest

INC0052093	04-09-2019 07:37:47	SQL Server Alert System: 'Severity 017' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	14-09-2019 11:00:04	system	FALSE	3 - Low	3 - Low	guest
INC0066379	15-11-2019 22:12:23	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	18-11-2019 09:42:48	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0064088	04-11-2019 22:22:51	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	05-11-2019 11:35:01	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0051570	02-09-2019 12:19:58	SQL Server Alert System: 'Severity 020' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	03-09-2019 14:21:15	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0051318	01-09-2019 04:34:00	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	03-09-2019 14:15:27	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0067931	23-11-2019 13:51:11	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	25-11-2019 10:22:41	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0048469	17-08-2019 08:17:04	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	25-08-2019 11:00:06	system	FALSE	3 - Low	3 - Low	guest
INC0067634	21-11-2019 22:17:30	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	27-11-2019 12:00:06	system	FALSE	3 - Low	3 - Low	guest
INC0043618	22-07-2019 16:41:23	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - Backup & Storage	s22(1)(a)(ii)	29-07-2019 18:00:08	system	FALSE	3 - Low	3 - Low	guest
INC0066437	16-11-2019 22:21:19	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	18-11-2019 09:42:48	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest

INC0050126	26-08-2019 11:38:18	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	04-09-2019 11:00:08	system	FALSE	3 - Low	3 - Low	guest
INC0051573	02-09-2019 12:24:29	SQL Server Alert System: 'Severity 020' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	03-09-2019 14:21:15	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0051391	02-09-2019 01:35:37	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	03-09-2019 14:15:28	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0047305	10-08-2019 08:38:04	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	25-08-2019 11:00:06	system	FALSE	3 - Low	3 - Low	guest
INC0066048	14-11-2019 22:13:38	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	18-11-2019 09:42:49	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0070474	05-12-2019 08:19:18	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	06-12-2019 08:47:08	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0047319	10-08-2019 09:25:59	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	25-08-2019 11:00:06	system	FALSE	3 - Low	3 - Low	guest
INC0066059	14-11-2019 22:40:16	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	18-11-2019 09:42:49	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0051395	02-09-2019 02:25:15	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	03-09-2019 14:13:33	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0050533	27-08-2019 22:14:54	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	04-09-2019 11:00:08	system	FALSE	3 - Low	3 - Low	guest

INC0051337	01-09-2019 07:31:58	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	03-09-2019 14:15:28	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0042217	13-07-2019 23:59:50	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	24-07-2019 16:00:05	system	FALSE	3 - Low	3 - Low	guest
INC0062458	28-10-2019 22:18:34	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	30-10-2019 09:16:54	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0046050	03-08-2019 09:06:22	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	10-08-2019 11:00:08	system	FALSE	3 - Low	3 - Low	guest
INC0049867	24-08-2019 09:55:29	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	31-08-2019 12:00:05	system	FALSE	3 - Low	3 - Low	guest
INC0065332	11-11-2019 22:08:46	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	13-11-2019 11:02:53	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0048427	16-08-2019 17:42:50	SQL Server Alert System: 'Severity 020' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	25-08-2019 13:00:34	system	FALSE	3 - Low	3 - Low	guest
INC0069361	01-12-2019 22:12:53	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	02-12-2019 13:37:06	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0068877	27-11-2019 22:08:35	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	29-11-2019 10:04:24	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0051962	03-09-2019 19:25:16	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	09-09-2019 09:30:47	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest

INC0040811	05-07-2019 21:23:15	SQL Server Alert System: 'Severity 017' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	13-07-2019 10:00:03	system	FALSE	3 - Low	3 - Low	guest
INC0069276	29-11-2019 22:37:42	SQL Server Alert System: 'Severity 017' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	07-12-2019 14:00:05	system	FALSE	3 - Low	3 - Low	guest
INC0060482	17-10-2019 22:11:43	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	18-10-2019 09:32:31	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0061964	25-10-2019 23:37:15	SQL Server Alert System: 'Severity 017' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	02-11-2019 14:00:06	system	FALSE	3 - Low	3 - Low	guest
INC0049595	22-08-2019 14:26:20	SQL Server Alert System: 'Severity 020' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	28-08-2019 11:00:08	system	FALSE	3 - Low	3 - Low	guest
INC0066757	18-11-2019 22:08:55	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	19-11-2019 16:34:18	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0050127	26-08-2019 11:40:23	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	04-09-2019 11:00:09	system	FALSE	3 - Low	3 - Low	guest
INC0049596	22-08-2019 14:26:21	SQL Server Alert System: 'Severity 020' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	28-08-2019 11:00:08	system	FALSE	3 - Low	3 - Low	guest
INC0061325	22-10-2019 22:21:18	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	23-10-2019 10:46:51	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest
INC0042163	12-07-2019 18:05:57	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	22-07-2019 18:00:07	system	FALSE	3 - Low	3 - Low	guest

INC0043779	23-07-2019 10:19:08	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - Backup & Storage	s22(1)(a)(ii)	29-07-2019 18:00:10	system		FALSE	3 - Low	3 - Low	guest
INC0052842	07-09-2019 13:57:33	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	09-09-2019 09:30:47	s22(1)(a)(ii)		FALSE	3 - Low	3 - Low	guest
INC0060227	16-10-2019 22:13:42	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	18-10-2019 09:32:32	s22(1)(a)(ii)		FALSE	3 - Low	3 - Low	guest
INC0052097	04-09-2019 07:46:20	SQL Server Alert System: 'Severity 020' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	04-09-2019 09:53:45	s22(1)(a)(ii)		FALSE	3 - Low	3 - Low	guest
INC0067994	24-11-2019 22:08:50	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	25-11-2019 10:22:44	s22(1)(a)(ii)		FALSE	3 - Low	3 - Low	guest
INC0059344	12-10-2019 09:26:28	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	21-10-2019 12:00:11	system		FALSE	3 - Low	3 - Low	guest
INC0043351	20-07-2019 11:14:20	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - Backup & Storage	s22(1)(a)(ii)	27-07-2019 15:00:05	system		FALSE	3 - Low	3 - Low	guest
INC0059318	12-10-2019 07:24:08	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	21-10-2019 12:00:11	system		FALSE	3 - Low	3 - Low	guest
INC0043801	23-07-2019 10:36:53	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - Backup & Storage	s22(1)(a)(ii)	29-07-2019 18:00:11	system		FALSE	3 - Low	3 - Low	guest
INC0060747	19-10-2019 11:27:54	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBD01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	21-10-2019 09:40:24	s22(1)(a)(ii)		FALSE	3 - Low	3 - Low	guest

INC0067874	22-11-2019 23:48:01	SQL Server Alert System: 'Severity 017' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Closed	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	30-11-2019 15:00:08	system	FALSE	3 - Low	3 - Low	guest	
INC0051292	31-08-2019 23:12:46	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	03-09-2019 14:11:29	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest	
INC0060731	19-10-2019 09:05:15	SQL Server Alert System: 'Severity 016' occurred on \\PVJDBT01\CLARITY	Alert Notifications	5 - Planning	Cancelled	Request/Enquiry	Software	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	21-10-2019 09:40:25	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	guest	
INC0041056	08-07-2019 15:02:21	Clarity - Add field	s22(1)(a)(ii)	5 - Planning	On Hold	Request/Enquiry	General Enquiry	PPM/Clarity [PROD]	Application Support - COTS	s22(1)(a)(ii)	21-01-2020 14:32:40	s22(1)(a)(ii)	TRUE	3 - Low	3 - Low	s22(1)(a)(ii)	
INC0038509	24-06-2019 13:02:20	CA PPM - Clarity	s22(1)(a)(ii)	3 - Moderate	Closed	Request/Enquiry	Software	PPM/Clarity [PROD]	Application Support - COTS	s22(1)(a)(ii)	29-06-2019 16:00:03	system	FALSE	2 - Medium	2 - Medium	s22(1)(a)(ii)	
INC0035220	04-06-2019 12:23:20	Clarity User Access Matrix - Add users to Clarity	s22(1)(a)(ii)	4 - Low	Closed	Request/Enquiry	Software	PPM/Clarity [PROD]	Application Support - COTS	s22(1)(a)(ii)	26-08-2019 10:00:04	system	FALSE	3 - Low	2 - Medium	s22(1)(a)(ii)	
INC0037820	19-06-2019 15:55:56	CAPPM - Clarity prod - reports issue when openeing risk tab in NUX	s22(1)(a)(ii)	3 - Moderate	Closed	Request/Enquiry	Software	PPM/Clarity [PROD]	Application Support - COTS	s22(1)(a)(ii)	29-06-2019 11:00:02	system	FALSE	2 - Medium	2 - Medium	s22(1)(a)(ii)	
INC0039437	28-06-2019 12:58:20	Can you please give me a list of all the people that have accessed clarity in the last 2 months.	s22(1)(a)(ii)	5 - Planning	Closed	Request/Enquiry	General Enquiry	PPM/Clarity [PROD]	Application Support - COTS	s22(1)(a)(ii)	26-08-2019 10:00:03	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)	
INC0026158	03-04-2019 10:54:06	Please add Project 'Clarity NUX (PPM)' to JIRA	s22(1)(a)(ii)	5 - Planning	Closed	Request/Enquiry	General Enquiry	Other	Application Services & Web Development	s22(1)(a)(ii)	15-04-2019 09:00:00	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)	
INC0053010	09-09-2019 11:14:31	Confirm Clarity Snapshots Can be deleted	s22(1)(a)(ii)	5 - Planning	In Progress	Request/Enquiry	Infrastructure		Application Support - COTS	s22(1)(a)(ii)	21-01-2020 14:34:23	pjoshim	TRUE	3 - Low	3 - Low	s22(1)(a)(ii)	
INC0062884	30-10-2019 12:41:51	Delete JIRA project Clarity NUX	s22(1)(a)(ii)	5 - Planning	Closed	Request/Enquiry	General Enquiry	Jira [PROD]	Application Services & Web Development	s22(1)(a)(ii)	10-11-2019 10:00:02	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)	
INC0019758	22-02-2019 13:31:39	Turn off Auditing for Clarity database in TEST	s22(1)(a)(ii)	3 - Moderate	Closed	Request/Enquiry	Software	PPM/Clarity [PROD]	Application Support - COTS	s22(1)(a)(ii)	03-04-2019 09:00:01	system	FALSE	1 - High	3 - Low	s22(1)(a)(ii)	
INC0018751	15-02-2019 12:37:14	Access to Clarity Application server in TEST	s22(1)(a)(ii)	3 - Moderate	Closed	Request/Enquiry	Access Management	PPM/Clarity [PROD]	Datacom - Wintel	s22(1)(a)(ii)	23-02-2019 11:00:02	system	FALSE	1 - High	3 - Low	s22(1)(a)(ii)	

INC0019823	22-02-2019 17:45:32	Clarity upgrade in TEST- turn on auditing and update Objective attribute	s22(1)(a)(ii)	5 - Planning	Closed	Request/Enquiry	Software	PPM/Clarity [PROD]	Datacom - DB SQL	s22(1)(a)(ii)	03-03-2019 12:00:03	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)
INC0037065	14-06-2019 11:54:14	Clarity Production environment is not available	s22(1)(a)(ii)	3 - Moderate	Closed	ICT	Unavailability	PPM/Clarity [PROD]	Application Support - COTS	s22(1)(a)(ii)	22-06-2019 09:00:04	system	FALSE	2 - Medium	2 - Medium	s22(1)(a)(ii)
INC0036266	11-06-2019 11:33:27	Baseline Clarity TEST environment with the Clarity Prod environment	s22(1)(a)(ii)	3 - Moderate	Cancelled	Request/Enquiry	Software	PPM/Clarity [PROD]	Application Support - COTS	s22(1)(a)(ii)	27-06-2019 17:22:04	s22(1)(a)(ii)	FALSE	s22(1)(a)(ii)	2 - Medium	s22(1)(a)(ii)
INC0019553	21-02-2019 10:28:45	Restore Clarity_PT database	s22(1)(a)(ii)	3 - Moderate	Closed	Request/Enquiry	Hardware		Datacom - DB SQL	s22(1)(a)(ii)	27-02-2019 18:00:03	system	FALSE	1 - High	3 - Low	s22(1)(a)(ii)
INC0010051	10-12-2018 08:56:46	Service Portal Get Help Request - Request to add "clarity" to ASK	s22(1)(a)(ii)	5 - Planning	Closed	Request/Enquiry	Software	ASK/ServiceNow [PROD]	ASK Administrators	s22(1)(a)(ii)	19-01-2019 12:00:01	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)
INC0038556	24-06-2019 15:54:17	reboot Clarity application server PVJASP03	s22(1)(a)(ii)	5 - Planning	Closed	Request/Enquiry	Infrastructure	PPM/Clarity [PROD]	Datacom - Wintel	s22(1)(a)(ii)	29-06-2019 18:00:06	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)
INC0034178	28-05-2019 16:30:12	New User Experience in Clarity Production environment to be configured as per the approved Change Specs	s22(1)(a)(ii)	5 - Planning	Closed	Request/Enquiry	General Enquiry	Email	Service Desk	s22(1)(a)(ii)	10-06-2019 18:00:04	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)
INC0020344	27-02-2019 10:59:40	ACC domain users cannot access Clarity servers on the Crimtracagency.corporate domain	s22(1)(a)(ii)	3 - Moderate	Closed	ICT	Unavailability	PPM/Clarity [PROD]	System Integrity and Engagement Team	s22(1)(a)(ii)	18-03-2019 09:00:03	system	FALSE	2 - Medium	2 - Medium	s22(1)(a)(ii)
INC0036576	12-06-2019 11:18:50	Please delete Clarity_PT_Restored on PVJDBT01\CLARITY. It is no longer required.	s22(1)(a)(ii)	5 - Planning	Closed	Request/Enquiry	General Enquiry		Datacom - DB SQL	s22(1)(a)(ii)	26-06-2019 13:00:04	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)
INC0046742	07-08-2019 12:22:32	Analytical report on Project Risks in Clarity	s22(1)(a)(ii)	4 - Low	Closed	Request/Enquiry	Software	PPM/Clarity [PROD]	Application Support - COTS	s22(1)(a)(ii)	26-08-2019 09:00:04	system	FALSE	2 - Medium	3 - Low	s22(1)(a)(ii)
INC0038521	24-06-2019 13:54:14	turn off emails getting generated from the Clarity Prod server	s22(1)(a)(ii)	3 - Moderate	Closed	Request/Enquiry	Software	PPM/Clarity [PROD]	Application Support - COTS	s22(1)(a)(ii)	01-07-2019 18:00:03	system	FALSE	2 - Medium	2 - Medium	s22(1)(a)(ii)
INC0011785	18-12-2018 15:45:43	Restore of Clarity TEST database	s22(1)(a)(ii)	5 - Planning	Closed	Request/Enquiry	Infrastructure	Database Management	Datacom - DB SQL	s22(1)(a)(ii)	24-12-2018 10:00:01	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)

INC0014684	17-01-2019 11:31:31	Restore of Clarity_PT database	s22(1)(a)(ii)	5 - Planning	Closed	Request/Enquiry	General Enquiry		Datacom - DB SQL	s22(1)(a)(ii)	22-01-2019 15:00:01	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)
INC0035265	04-06-2019 12:23:20	Clarity User Access Matrix - Add users to Clarity	s22(1)(a)(ii)	4 - Low	Closed	Request/Enquiry	Software	PPM/Clarity [PROD]	Application Support - COTS	s22(1)(a)(ii)	26-08-2019 10:00:04	system	FALSE	3 - Low	2 - Medium	s22(1)(a)(ii)
INC0039025	26-06-2019 13:54:19	ensure no emails are sent out from Clarity Production server	s22(1)(a)(ii)	3 - Moderate	Closed	Request/Enquiry	Software	PPM/Clarity [PROD]	Application Support - COTS	s22(1)(a)(ii)	02-07-2019 18:00:01	system	FALSE	2 - Medium	2 - Medium	s22(1)(a)(ii)
INC0022082	12-03-2019 08:57:25	Redeploy Clarity Services on PVJASP03 server	s22(1)(a)(ii)	5 - Planning	Cancelled	Request/Enquiry	Software	Server Management	Application Support - COTS	s22(1)(a)(ii)	12-03-2019 11:36:32	s22(1)(a)(ii)	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)
INC0011199	14-12-2018 10:37:15	Out of Office: Incident INC0011197 has been logged - Out of Office: Incident INC0011177 has been assigned to group Application Support - SAP/Clarity [DLM=For-O	s22(1)(a)(ii)	5 - Planning	Closed	Request/Enquiry	General Enquiry	Email	Service Desk	s22(1)(a)(ii)	22-12-2018 14:00:04	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)
INC0010916	13-12-2018 09:08:56	Modify email distribution list for Application Support - SAP/Clarity in ASK	s22(1)(a)(ii)	5 - Planning	Closed	Request/Enquiry		Email	ASK Administrators	s22(1)(a)(ii)	24-12-2018 10:00:02	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)
INC0011197	14-12-2018 10:32:02	Out of Office: Incident INC0011177 has been assigned to group Application Support - SAP/Clarity	s22(1)(a)(ii)	5 - Planning	Closed	Request/Enquiry			Service Desk	s22(1)(a)(ii)	19-12-2018 16:00:02	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)
INC0019309	20-02-2019 09:30:26	MSSQL PVJDBD01\CLARITY - Clarity DEV SQL logs	s22(1)(a)(ii)	5 - Planning	Closed	Request/Enquiry	General Enquiry		Datacom - DB SQL	s22(1)(a)(ii)	02-03-2019 14:00:01	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)
INC0053011	09-09-2019 11:13:53	Are there any clarity application processes/jobs that run on saturday's at 2AM?	s22(1)(a)(ii)	5 - Planning	Closed	Request/Enquiry	General Enquiry		Application Support - COTS	s22(1)(a)(ii)	22-09-2019 12:00:02	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)
INC0044623	26-07-2019 12:49:14	MSSQL - PVJDBT01\CLARITY - Clarity TEST failed logins	s22(1)(a)(ii)	5 - Planning	Closed	Request/Enquiry	General Enquiry		Datacom - DB SQL	s22(1)(a)(ii)	05-08-2019 15:00:04	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)

INC0038920	26-06-2019 09:14:55	MSSQL PVJDBD01\CLARITY	s22(1)(a)(ii)	5 - Planning	Closed	Request/Enquiry	General Enquiry		Datacom - DB SQL	s22(1)(a)(ii)	01-07-2019 14:00:03	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)
INC0011614	18-12-2018 09:09:39	Copy Clarity patch to network	s22(1)(a)(ii)	5 - Planning	Closed	Request/Enquiry	Software	PPM/Clarity [PROD]	Service Desk	s22(1)(a)(ii)	23-12-2018 12:00:01	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)
INC0075779	13-03-2020 11:19:44	Clarity on Change of Name certificate	s22(1)(a)(ii)	5 - Planning	Closed	National Police Checking	Customer Enquiries		NPCS - Service Delivery	s22(1)(a)(ii)	18-03-2020 14:00:01	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)
INC0013507	09-01-2019 11:24:24	Clarity - Access Issues	s22(1)(a)(ii)	5 - Planning	Closed	Request/Enquiry	Software	PPM/Clarity [PROD]	Technical Services	s22(1)(a)(ii)	16-01-2019 09:00:00	system	FALSE	3 - Low	3 - Low	s22(1)(a)(ii)

Report Title: Resolution notes
Run Date and Time: 11-06-2020 15:51:56 Australian Eastern Standard Time (New South Wales)
Run by: s 22(1)(a)(ii)
Table name: incident
Query Condition: Active = false AND Number in INC0013577, INC0057936, INC0052826, INC0052098, INC0067993, INC0068598, INC0050845, INC0069338, INC0059615, INC0043517, [...]
Sort Order: Number in ascending order

126 Incidents

▲ Number	Resolution notes
INC0010051	Clarity PPM is part of the User access form now. This change will be released to production in this week's release cycle.
INC0010916	Members removed as requested
INC0011197	Out of office emails will no longer log after change is pushed out.
INC0011199	s s Out of office. This should not be logging and is being looked at under a separate request.
INC0011614	2(Ing action in INC0011597
INC0011785	1) ticket completed as requested.
INC0013507	(a Identified that the svcClarity is diabled) The Service Account is located in CrimTrac OU (ii) Re-enabled the account Tested and confirmed working Spoke with s - Confirmed working
INC0013577	Identified that the svcClarity is diabled The Service Account is located in CrimTrac OU Re-enabled the account Tested and confirmed working
INC0014684	Request completed successfully
INC0018751	access granted
INC0019309	pipe is immediately reopened so no issue to end user.
INC0019553	completed successfully
INC0019758	Y:\Release Artefacts\CLARITY Artefacts\Upgrade\Scripts\TurnOffAuditing.sql was successfully executed to turn off Auditing for Clarity database in TEST environment.
INC0019823	task completed successfully
INC0020344	resolved
INC0022082	Closed by Caller
INC0026158	Project created in JIRA.
INC0034178	No action required.
INC0035220	resolved and updated the caller on 6 June 2019.
INC0035265	On 6 June 2019, this request was completed. The users with their OBS values set up in Clarity.
INC0036266	sending back to s for cancelling per his email 22(1) Closed as per the instructions from s 22(1)(a)(ii) detailed in the (a)(ii) email attached: Close INC0036266 Baseline Clarity TEST environment with the Clarity Prod environment.msg
INC0036576	completed under CHG0030883
INC0037065	server was rebooted.

▲ Number	Resolution notes
INC0037820	The user should not have selected the attributes not listed in the Systems Specs and the Quick User Guide.
INC0038509	Currently this option is available in the Classic UI. Hence the user is requested to use the Classic UI. The user is also granted with administrative controls in the TEST and Prod environment to verify the blueprints.
INC0038521	The email address of users changed to PMO@acic.gov.au and their original email address stored in excel spread sheet - TRIM D19-5631. cmn_sec_users and srm_resources table store the email address. As a backup, TRIM D19-5620 has a record of the email processes in Clarity that are placed 'On hold' from 'Active' status. Should one wish to make them active, click on http://pvjasp03.crimtracagency.corporate/niku/nu#action:bpm.processDefinitions&object_type=admin&ui.page.space=bpm.processDefinitions&ui.page.template=union.adminPage&bpm.returnModuleAction=bpm.processDefinitionsReturn&uitk.navigation.parent.location=Workspace&uitk.navigation.last.workspace.action=bpm.processDefinitions&dynamicSessionKey=bpm.processDefinitions&partition=All&status=All&mode=BPM_PUS_ON_HOLD&currentPage=1&superSecretTokenKey=superSecretTokenValue
INC0038556	actioned
INC0038920	occurred at same time as SDC experienced a network hiccup. Backup subsequently succeeded. No further DBA action required.
INC0039025	1. email addresses of the individuals are now changed to pmp@acic.gov.au and 2. processes that generate emails are now put on hold.
INC0039437	on 28 June 2019, I provided a list to Andrew.
INC0040811	Investigated. No DBA action required
INC0041238	Associating to Probem ticket as it is on-going
INC0042163	Resolved as this error was generated when the commvault system had issues.
INC0042178	Resolved as this error was generated when the commvault system had issues.
INC0042192	Self healed event
INC0042217	Self healed event
INC0043334	Associating to Probem ticket as it is on-going
INC0043351	Associating to Probem ticket as it is on-going
INC0043517	Associating to Probem ticket as it is on-going
INC0043618	Related to Problem Ticket this is being investigated
INC0043620	Related to Problem Ticket this is being investigated
INC0043674	Related to Problem Ticket this is being investigated
INC0043779	Related to Problem Ticket this is being investigated
INC0043801	Related to Problem Ticket this is being investigated
INC0043805	Related to Problem Ticket this is being investigated
INC0044623	Information has been provided to s 22(1)(a)(ii) for resolution. No further DBA action required
INC0046050	Linked to parent ticket and resolved. Parent ticket will be assigned to Datacom Backup and Storage
INC0046080	Linked to parent ticket and resolved. Parent ticket will be assigned to Datacom Backup and Storage
INC0046123	linked to parent ticket. Rest closed.

▲ Number	Resolution notes
INC0046742	Provided the report to the PMO (s 22(1)(a)(ii) and s 22(1)(a)(ii) on 13/08/2019. TRIM D19-6884.
INC0047305	These have been linked to parent ticket INC0047320
INC0047319	These have been linked to parent ticket INC0047320
INC0048426	Nessus vulnerability scanner. IT Security have confirmed this can be ignored.
INC0048427	Nessus vulnerability scanner. IT Security have confirmed this can be ignored.
INC0048462	These have been linked to parent ticket INC0047320
INC0048469	These have been linked to parent ticket INC0047320
INC0049595	false positives caused by IT Security PortScanning. Please see (INC0048445) for information.
INC0049596	false positives caused by IT Security PortScanning. Please see (INC0048445) for information.
INC0049848	investigated. no dba action required
INC0049867	linked to INC0049667 and closed as duplicates
INC0049888	linked to INC0049667 and closed as duplicates
INC0049993	Resolution notes copied from Parent Incident: this error is generated by IT Security scans and can be safely ignored.
INC0049995	Resolution notes copied from Parent Incident: this error is generated by IT Security scans and can be safely ignored.
INC0050126	closing tickets. Will reassign parent to storage
INC0050127	closing child tickets. will reassign parent ticket to backup and storage
INC0050533	closing child tickets. will reassign parent ticket to backup and storage
INC0050845	Resolution notes copied from Parent Incident: caused by IT Security scanning. Known message which will be removed from auto-generated ASK alerts
INC0050846	Resolution notes copied from Parent Incident: caused by IT Security scanning. Known message which will be removed from auto-generated ASK alerts
INC0051271	Resolution notes copied from Parent Incident: SQL alerting which duplicates Datacom Backup and Storage alerting. Handled by Backup team. closed as duplicates
INC0051292	Resolution notes copied from Parent Incident: duplicates.
INC0051318	Resolution notes copied from Parent Incident: SQL alerting which duplicates Datacom Backup and Storage alerting. Handled by Backup team. closed as duplicates
INC0051337	Resolution notes copied from Parent Incident: SQL alerting which duplicates Datacom Backup and Storage alerting. Handled by Backup team. closed as duplicates
INC0051391	Resolution notes copied from Parent Incident: SQL alerting which duplicates Datacom Backup and Storage alerting. Handled by Backup team. closed as duplicates
INC0051395	Resolution notes copied from Parent Incident:
INC0051570	Resolution notes copied from Parent Incident: false positive caused by IT Security scanning
INC0051573	Resolution notes copied from Parent Incident: false positive caused by IT Security scanning
INC0051962	Resolution notes copied from Parent Incident:

▲ Number	Resolution notes
INC0052093	investigated. Listening again. no dba action required
INC0052097	Resolution notes copied from Parent Incident:
INC0052098	
INC0052826	
INC0052842	Resolution notes copied from Parent Incident:
INC0053011	application server was restarted.
INC0057936	Cancelled via the Service Portal.
INC0059318	Resolution notes copied from Parent Incident: Closing out as no issue found in commvault
INC0059344	Resolution notes copied from Parent Incident: Closing out as no issue found in commvault
INC0059615	Resolution notes copied from Parent Incident: No issue found in commvault
INC0060227	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0060482	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0060731	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0060747	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0061315	Resolution notes copied from Parent Incident:
INC0061325	Resolution notes copied from Parent Incident:
INC0061964	connection automatically re-established at 25/10/2019 11:16:33 PM Server local connection provider has successfully re-established listening on [\\.\pipe\SQLLocal\CLARITY
INC0062044	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0062458	Resolution notes copied from Parent Incident: duplicate Commvault tickets
INC0062884	Project removed from JIRA.
INC0064088	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0065332	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0065578	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0065737	server restarted due to windows patching
INC0066048	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0066059	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0066379	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0066437	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0066757	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0066762	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0067376	Resolution notes copied from Parent Incident: Self healed tickets
INC0067634	Resolution notes copied from Parent Incident: Self healed tickets
INC0067874	Issue resolved Date: 22/11/2019 11:27:33 PM Message: Server local connection provider has successfully re-established listening on [\\.\pipe\SQLLocal\CLARITY].
INC0067931	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0067948	Resolution notes copied from Parent Incident: duplicate Commvault ticket

▲ Number	Resolution notes
INC0067993	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0067994	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0068275	Resolution notes copied from Parent Incident:
INC0068276	Resolution notes copied from Parent Incident:
INC0068598	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0068604	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0068877	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0068884	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0069276	connection re-established Date29/11/2019 10:23:48 PM Message Server local connection provider has successfully re-established listening on [\\.\pipe\SQLLocal\CLARITY].
INC0069302	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0069338	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0069361	Resolution notes copied from Parent Incident: duplicate Commvault ticket
INC0070474	Resolution notes copied from Parent Incident: Duplicate Commvault ticket
INC0070612	Resolution notes copied from Parent Incident: Duplicate Commvault ticket

Annexure D

4. *Has the ACIC made any decision to retire Clarity PPM and switch to another tool?*
    a. *If yes, what is the name of the new PPM tool that the agency intends to implement?*
    b. *If yes, when was the decision made?*
    c. *Did ACIC approach the market to procure a suitable PPM tool, #4.a? What procurement method was used?*

- The ACIC currently has a licence for Clarity PPM, however this software is not currently in use.
- The technology currently in use is ServiceNow's Information Technology Business Management (ITBM) Pro Suite hosted by Fujitsu Australia Limited.
- A Business Case for a Portfolio, Program and Project Management (P3M) Solution was approved by the CEC in February 2020 allowing the procurement of ServiceNow's ITBM Pro Suite . The decision to vary the ACIC's contract with Fujitsu Australia Limited to procure ServiceNow's ITBM Pro Suite was made on 6 March 2020.

ANNEXURE E

A Forrester Total Economic Impact™
Study Commissioned By ServiceNow
October 2018

The Total Economic Impact™ Of ServiceNow IT Business Management

Cost Savings And Business Benefits Enabled By Project And Portfolio Management

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Project Director:
Sean McCormick

ABOUT FORRESTER CONSULTING

Forrester Consulting provides independent and objective research-based consulting to help leaders succeed in their organizations. Ranging in scope from a short strategy session to custom projects, Forrester's Consulting services connect you directly with research analysts who apply expert insight to your specific business challenges. For more information, visit forrester.com/consulting.

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Benefits And Costs



Capital and resource optimization
$3,959,877



Productivity improvements:
$10,781,622



Faster time-to-market
$1,956,873

Executive Summary

ServiceNow IT Business Management (ITBM) provides a project and portfolio management solution that helps its customers improve capital and resource optimization while accelerating project time-to-value. ServiceNow commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying ServiceNow ITBM. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of the Project and Portfolio Management (PPM) and other product features of ITBM on their organizations.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed two customers and surveyed 30 more, all with multiple years of experience using ServiceNow ITBM. ServiceNow's PPM solution is part of the IT Business Management solution set, which includes the following modules: Project and Portfolio Management, Resource Management, Demand Management, Agile Development, Test Management, Time Cards/Sheets, and Financial Management. These capabilities work together to help customers strategically align portfolio spend, accelerate project time-to-value, manage resources more efficiently, and improve project performance and visibility for leadership.

Prior to using ITBM, the customers we spoke with and surveyed typically utilized a legacy on-premises PPM solution or spreadsheets driven by manual processes. However, these solutions lacked the ability for project and program managers, portfolio managers, and leaders to gain visibility into both project demand and performance. This led to inefficient resource allocations, delays in projects, and misalignment of capital spend to strategic priorities. One customer said, "Prior to implementing ServiceNow, we had strategic projects being tracked on spreadsheets and all kinds of other places." Another customer added: "Now, all the C-suite executives pull up ServiceNow and share the reports, they can see the 30 projects going live this month. That value has been tremendous." Not only did ServiceNow ITBM solve these issues, but customers found that having a software-as-a-service (SaaS) solution saved them time in deployment and provided synergies with their existing ServiceNow IT Service Management (ITSM) solution.

Key Findings

Quantified benefits. The following risk-adjusted present value (PV) quantified benefits are representative of those experienced by the companies interviewed and surveyed:

CAPITAL AND RESOURCE OPTIMIZATION

- **ServiceNow ITBM enables organizations to do more with their money, increasing capital efficiency by 30%.** Prior to adopting ServiceNow ITBM, customers reported that scope creep and other inefficiencies in project management led to project delays and the inability to complete projects on time, leaving valuable capital allocated dollars on the table every year. The ITBM solution helped them remediate these issues, ensuring they could more efficiently utilize the capital appropriations and increasing the overall annual project returns by $400,000 per year.

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ROI
397%



Benefits PV
$16.7 million



NPV
$13.3 million



Payback
<6 months

› **Increased resource utilization and the ability to allocate resources effectively to projects accounts for a 12% improvement in project productivity.** One of the most prolific benefits from utilizing the ServiceNow ITBM solution is the ability to track the utilization of resources with key skill sets. Project managers (PMs) can collaborate across multiple projects, ensuring skilled resources align to project needs at the right time. This alignment reduces project delays and results in $1.2 million in savings per year.

PRODUCTIVITY IMPROVEMENTS

› **Having the right resources not only reduces project delays, but it reduces rework, increasing project productivity by 20%.** Interviewed and surveyed customers reported a reduction in project rework of 10%. Furthermore, these companies saw a general productivity improvement across projects of an additional 10%. On average, for the composite organization, this equates to an annual cost savings of $1.9 million.

› **With ITBM, project managers can save 8 hours in administrative and reporting capabilities, while reducing meetings every month.** Increased visibility into project performance through the use of ServiceNow ITBM reporting tools enables project managers to save 8 hours per month per project. With the ability to self-serve performance reports, organizations can reduce and streamline meetings every month, saving approximately 10 hours of employees' time in meetings per project. Overall, this equates to a cost savings of over $1.2 million per year.

› **The Time Card/Sheets module saves project resources 30 minutes per week in time-tracking effort.** As part of the ServiceNow ITBM solution, Time Cards/Sheets enables project resources to track their time more efficiently than with their previous processes. This is an important component in allowing project managers to track resource utilization. Altogether, the Time Cards/Sheets capability saves over $1.1 million a year in resource time.

FASTER TIME-TO-MARKET

› **ServiceNow ITBM accelerates project time-to-market by 23%.** With the ServiceNow ITBM capability set, customers reported the ability to increase speed in screening and approving projects by 11% on average. They were also able to allocate resources to projects much faster, by 12%. Assuming an organization spends $10.5 million per year on project costs and averages a 15% three-year return on investment (ROI) for those projects, this equates to over $786,000 per year in accelerated value.

Flexibility benefits. The interviewed and surveyed organizations experienced the following flexibility benefits, which are not quantified for this study:

› **Organizations saw synergies with ServiceNow ITSM after adopting ITBM.** Many of the interviewed and surveyed organizations had already implemented ServiceNow's service management solution. These organizations identified synergies with ITBM once deployed. For example, organizations could utilize service tickets and issues tracking to inform the project demand pipeline and provide an overall feedback loop from customer identification through issue resolution and project completion. This synergy better aligns project capital with customer demand.

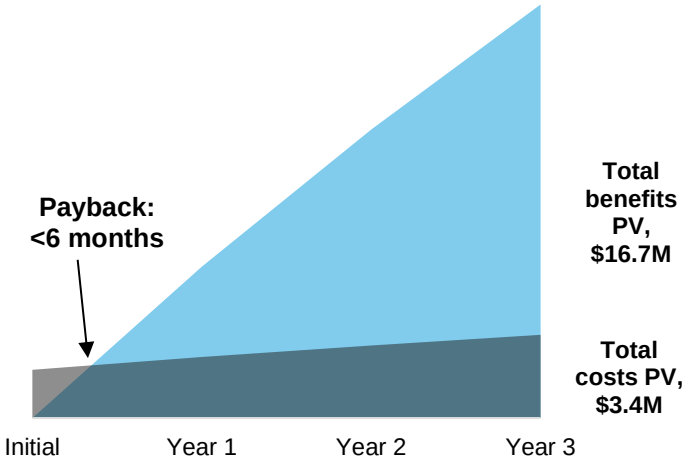
› **ServiceNow ITBM supports agile delivery methodology helping delivery teams improve efficiency by 35% to 40%.** While the interviewed customers were still utilizing Agile in proof of concept (POC), initial results were strong. Teams reported the ability to turn out 35% more work per hour. Furthermore, they increased their ability to meet customer expectations from 50% – 60% to 90% - 95%.

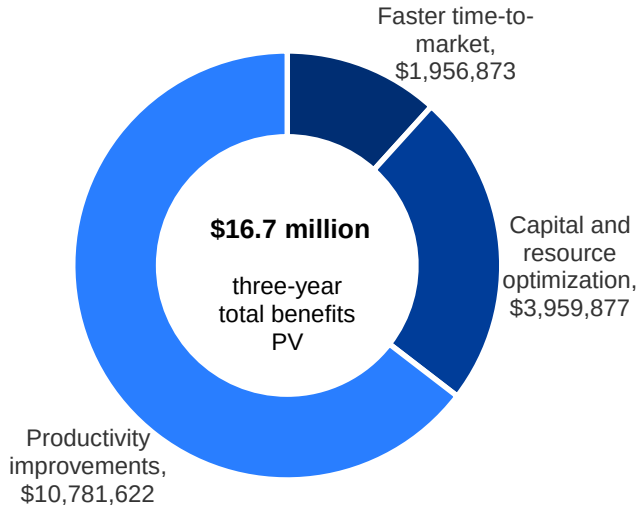
Costs. The interviewed and surveyed organizations experienced the following risk-adjusted PV costs, scaled to match this study's composite organization, which is explained in more detail in the Customer Journey section of this study:

› **The composite organization incurred $3.4 million in implementation and ongoing subscription cost for ServiceNow ITBM.** For a composite organization, the total implementation costs are $2.6 million with typical deployment time of three to five months and a 1:1 ratio of annual license to service fees. This includes Project and Portfolio Management, Resource Management, Demand Management, and Time Cards/Sheets.

Forrester's interviews with two existing customers, survey results, and subsequent financial analysis found that an organization based on these interviewed and surveyed organizations experienced benefits of $16.7M over three years versus costs of $3.4M, adding up to a net present value (NPV) of $13.3M and an ROI of 397%.

Financial Summary





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TEI Framework And Methodology

From the information provided in the interviews, Forrester has constructed a Total Economic Impact™ (TEI) framework for those organizations considering implementing ServiceNow ITBM.

The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision. Forrester took a multistep approach to evaluate the impact that ServiceNow ITBM can have on an organization:

The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.



DUE DILIGENCE
Interviewed ServiceNow stakeholders and Forrester analysts to gather data relative to ITBM.



CUSTOMER INTERVIEWS AND SURVEY
Interviewed two organizations and surveyed 30 others using ITBM to obtain data with respect to costs, benefits, and risks.



COMPOSITE ORGANIZATION
Designed a composite organization based on characteristics of the interviewed and surveyed organizations.



FINANCIAL MODEL FRAMEWORK
Constructed a financial model representative of the interviews and survey using the TEI methodology and risk-adjusted the financial model based on issues and concerns of the interviewed and surveyed organizations.



CASE STUDY
Employed four fundamental elements of TEI in modeling ServiceNow ITBM's impact: benefits, costs, flexibility, and risks. Given the increasing sophistication that enterprises have regarding ROI analyses related to IT investments, Forrester's TEI methodology serves to provide a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

DISCLOSURES

Readers should be aware of the following:

This study is commissioned by ServiceNow and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.

Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the report to determine the appropriateness of an investment in ServiceNow ITBM.

ServiceNow reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.

ServiceNow provided the customer names for the interviews but did not participate in the interviews.

The ITBM Customer Journey

BEFORE AND AFTER THE ITBM INVESTMENT

Interviewed Organizations

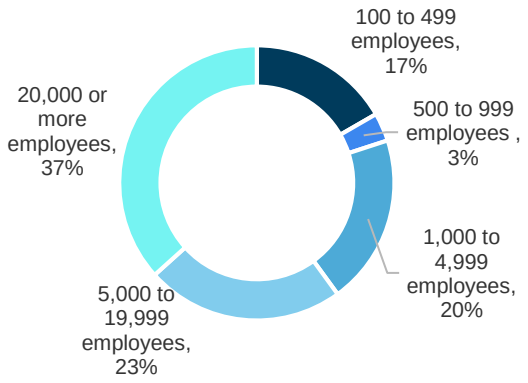
For this study, Forrester conducted two interviews and surveyed 30 more ServiceNow ITBM customers. Interviewed customers include the following:

INDUSTRY	REVENUE	EMPLOYEES	ITBM USERS
Healthcare	$1.1 billion	16,000 employees	609 planner licenses
Education	$1.2 billion	7,000 employees	540 planner licenses

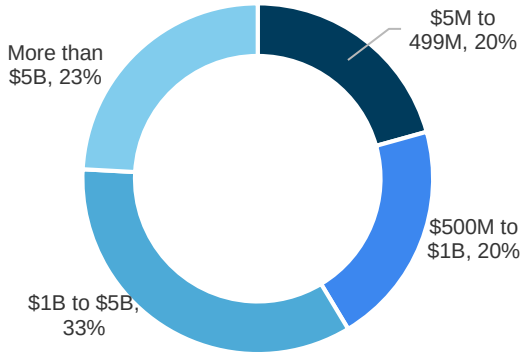
Surveyed customers were all US IT decision makers, director level or above, responsible for project and portfolio management. They represented companies across a number of industries, including manufacturing, healthcare, financial services, business and consumer services, entertainment and leisure, insurance, and education. The size of these organizations ranged from small companies to global enterprises as seen in Figure 1.

FIGURE 1: TOTAL EMPLOYEES AND ANNUAL REVENUE OF SURVEYED ORGANIZATIONS

"Using your best estimate, how many employees work for your firm/organization worldwide?"



"Using your best estimate, what is your organization's total annual revenue (in USD)?"



Base: 30 US IT decision makers responsible for implementation and use of ServiceNow ITBM.
Note: Percentages may not total 100 because of rounding.
Source: A commissioned study conducted by Forrester Consulting on behalf of ServiceNow, August 2018

Key Challenges

Prior to adopting ServiceNow ITBM, the interviewed and surveyed companies utilized legacy on-premises PPM solutions or spreadsheets driven by manual processes. These solutions for project and portfolio management posed many challenges that led organizations to adopt ServiceNow ITBM:

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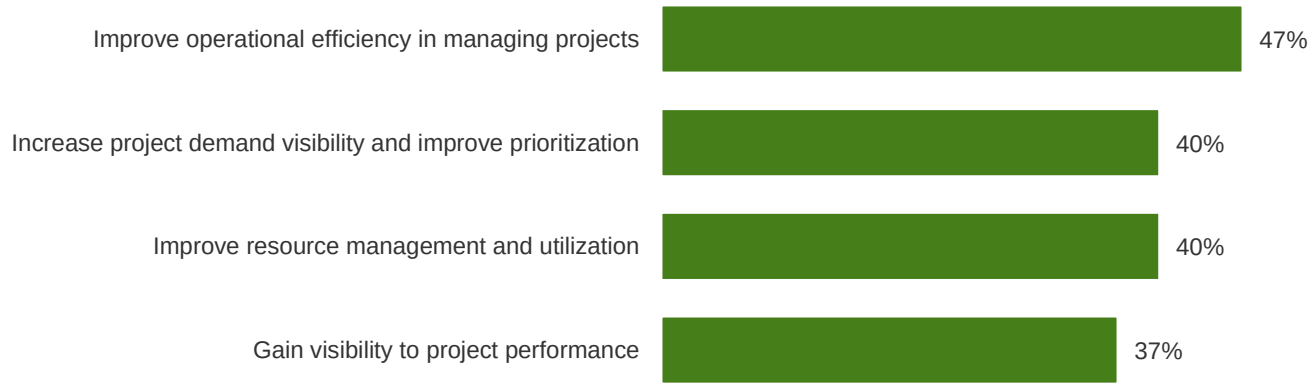
- **Improving operational efficiency in managing projects was the No. 1 reason companies adopted a PPM solution.** Clearly, improving operational efficiency in managing projects is the core capability of any PPM solution, but organizations that were utilizing spreadsheets had a much greater need to capture this capability. Historically, companies were challenged with reporting on project performance and collaborating across multiple projects to identify available resources or gain insights into project timelines. Leadership also lacked visibility into projects, preventing them from identifying high-level trends and risks to projects.
- **The second reason organizations adopted ServiceNow ITBM was to increase demand visibility and improve prioritization.** In fact, 12 of the 30 surveyed organizations and both interviewed organizations identified this as one of the top three reasons for adoption. Prior to investing in the ITBM solution, these companies had poor processes around demand management and were reactionary to the needs of the business. As demands arose throughout the year, existing processes were not set up to accommodate the addition of new projects and shifting of budget or resources. Furthermore, finding resources for ad hoc processes was difficult as no visibility into resource availability existed.
- **Improving resource management rounded out the top three reasons organizations adopted ServiceNow ITBM.** A big opportunity for companies prior to adopting ITBM was improving resource utilization. Organizations clearly lacked visibility into resource availability from project to project. If one project needed a resource with specific skill sets and that resource was assigned to another project, it would be difficult to know when the resource had excess capacity to shift over. Furthermore, identifying resources to allocate to projects upfront was inefficient since skill sets and availability were unknown.

"ServiceNow ITBM has enabled us to be able to look at demands from different ways; it has empowered and facilitated the business to make decision. IS isn't deciding what we're working on; the business is. They're able to see projects broken down by ROI with questions that are strategic to our values here at the organization."

Director of strategic program, healthcare

FIGURE 2: THE TOP THREE PRIORITIES/BUSINESS OBJECTIVES IN INTRODUCING A PPM SOLUTION

"What were your company's top three priorities/business objectives for introducing a PPM solution?"



Base: 30 US IT decision makers responsible for implementation and use of ServiceNow ITBM
Source: A commissioned study conducted by Forrester Consulting on behalf of ServiceNow, August 2018

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Solution Requirements

The surveyed and interviewed organizations searched for a solution that could:

- Increase alignment between IT and the business.
- Easily scale and grow with the business.
- Improve resource management capabilities.

The surveyed and interviewed organizations chose ServiceNow ITBM and began deployment:

- Initial planning and configuration of reports took roughly three to four months.
- The interviewed companies put in place a proof of concept prior to rolling out into full production.
- The interviewed companies provided training for PPM users and Time Card/Sheet submitters.

> "Now, we have the business actually involved in our process. They log in as a licensed user inside of ServiceNow, and they participate on the front end and help us evaluate and filter throughout the demand process."
>
> *Director of strategic program, healthcare*



Key Results

The interviews and survey revealed that key results from the ITBM investment include:

- **Faster time-to-market.** ServiceNow ITBM gave leadership insights into the demand pipeline, allowing them to better align to business needs. Prior to adopting ServiceNow ITBM, one customer recounted the demand intake and governance process, stating, "We had no reporting, no dashboards, no metrics, and zero visibility." Essentially, as project demand was added to the list, this customer would just approve all projects but would be unable to deliver due to resource constraints. Additionally, the increased visibility and new engagement with the business allowed this customer to align project approvals to strategic priorities for the organization. Historically, this customer had a laminated template and would sit in a room, without the business, and just put project sticky notes on the template: That was the demand planning meeting. Now, the business logs into ServiceNow ITBM and evaluates and filters out projects throughout the planning process. Furthermore, with ServiceNow ITBM synchronized to the organization's service management tool, it could more appropriately funnel work and requests into the project demand space. Ultimately, the interviewed organization streamlined its project planning process and increased the number of projects delivered each year by 30%.

  Surveyed customers reported time savings in the demand planning process, stating that on average ServiceNow ITBM allowed them to reduce the time in screening and approving projects by 10.9% and increase the speed at which resources were allocated to projects by 11.8%. The demand planning efficiencies, along with other time savings throughout the project, led to the delivery of 15.2% more projects annually and an average revenue increase from faster time-to-market of 8.7%.

> "In the first year of using ServiceNow ITBM, we saw a 66% reduction in the amount of projects that entered our demand pipeline as the business now vetted and filtered them out."
>
> *Chief information services architect, healthcare*



- **Better resource utilization.** Based on the surveyed responses, the No. 1 benefit of implementing ServiceNow ITBM with the Resource Management module was the ability to better utilize resources. Not only does ServiceNow make it easier upfront to allocate resources to a project, but it makes it easier to reallocate resources across projects when skill-set needs arise and resources have open capacity. One interviewed customer said, "ServiceNow gives us the data to see where the resources are allocated and where they might be reallocated to based on strategic importance and open capacity." With the improved visibility into resource capacity and demand, survey respondents reported on average a 12.6% increase in resource utilization. Furthermore, it was estimated that organizations were now saving roughly 17.5 hours of delays due to resource constraints per project after adopting ServiceNow Resource Management.

  Interviewed customers told Forrester that improving visibility into resource capacity and utilization helped them reduce project overtime as well as the excess demand burden on resources. This saved an average of 11.1% of labor cost savings per project while improving employee satisfaction and morale. This was a critical component to ensuring the success of projects and continued creation of customer value.

> "It brings transparency to the process, and it sounds kind of like cliché, but it brings trust as a result."
>
> *Director of services and project management, education*



- **Better planning and project efficiency.** Outside of overtime savings and increased ability to allocate resources to projects, project managers gained the ability to manage projects more effectively. The surveyed respondents reported a 14.8% average reduction in the number of projects that went over budget and/or timeline. This was due to a combination of improved project productivity through better collaboration as well as a decrease in the amount of rework required on projects. Organizations reported that they experienced a 12.5% improvement in project productivity after adopting ServiceNow ITBM. One respondent said that now that the company has accurate status reporting and project dashboards, it can get a better estimate of the workload each activity requires and appropriately plan out resource needs across multiple projects. Another respondent said the company could reduce the number of test scripts that required rework, ultimately saving nearly two weeks of work for 25 FTEs. The survey concluded that organizations were saving an average of 16.6 hours per project by reducing rework.
- **Administrative and reporting efficiencies.** Project managers also experienced a large time savings in adopting ServiceNow ITBM. Managing resources across projects and sharing information with other project managers became exponentially easier. Monthly reporting and sharing of project status reports became essentially automated. The director of services and project management at an education organization said, "It used to take our PMs 8 hours a month to pull the project report together and get the presentation ready to share with business partners, but with ServiceNow, it only takes 15 minutes."

  Additionally, with Time Cards/Sheets, workers would be able to log and track their time across multiple projects, giving PMs insights into where they were spending their time. We asked respondents to estimate the number of hours saved by reducing the amount of administrative or management time spent on project reporting and other administrative activities; the responses ranged from 6 to 10 hours per project up to 80 hours per project depending on the length of time and size of the project.

> "It used to take our PMs 8 hours a month to pull the project report together and get the presentation ready to share with business partners, but with ServiceNow, it only takes 15 minutes."
>
> *Director of services and project management, education*



Composite Organization

Based on the interviews and survey, Forrester constructed a TEI framework, a composite company, and an associated ROI analysis that illustrates the areas financially affected. The composite organization is representative of the two companies that Forrester interviewed and the 30 companies it surveyed and is used to present the aggregate financial analysis in the next section. The composite organization that Forrester synthesized from the customer interviews has the following characteristics:

Description of composite. The composite organization is a US-based company with $10 billion in annual revenue and 17,000 employees. It is growing rapidly and constantly needs to improve its people, processes, and technology to meet their customers' ever-changing needs. The company has a strong brand and a large customer base. It spends approximately $10.5 million annually on technology projects that are managed with ServiceNow ITBM.

Deployment characteristics. The composite organization adopted ServiceNow ITBM two years ago. This came after its deployment of ServiceNow ITSM. The composite organization currently has 175 project managers and 875 licensed workers tracking time and utilizing ServiceNow ITBM. It recently started a POC with ServiceNow's Agile Development offering.



Key assumptions

17,000 employees

$10 billion revenue

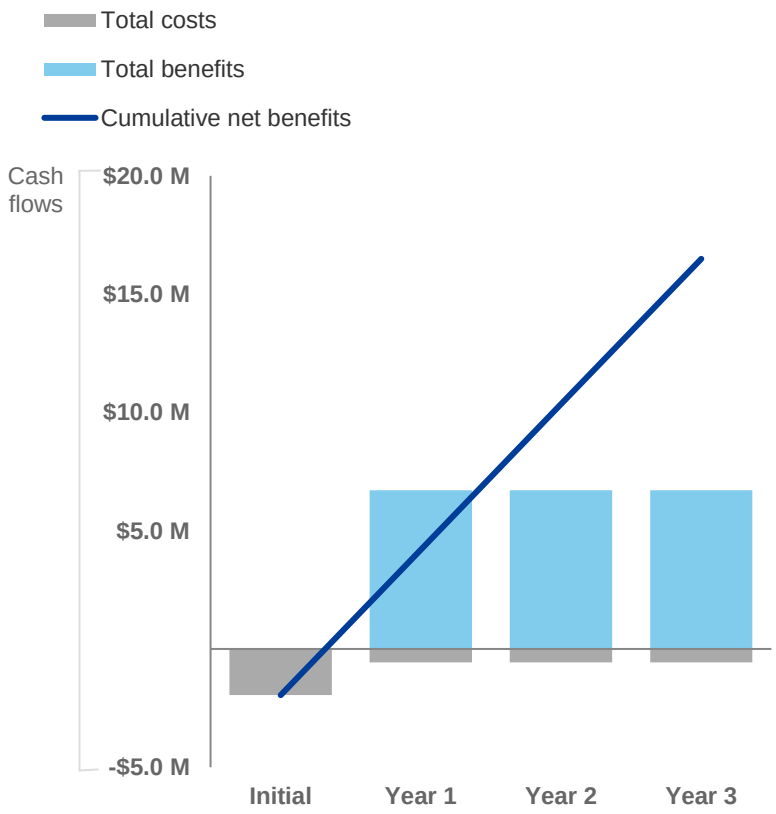
$10.5 million annual project spend

875 workers, 175 project manager ServiceNow ITBM licenses

Financial Summary

CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

Cash Flow Chart (Risk-Adjusted)



The financial results calculated in the Benefits and Costs sections can be used to determine the ROI, NPV, and payback period for the composite organization's investment. Forrester assumes a yearly discount rate of 10% for this analysis.

These risk-adjusted ROI, NPV, and payback period values are determined by applying risk-adjustment factors to the unadjusted results in each Benefit and Cost section.

Cash Flow Table (Risk-Adjusted)

	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Total costs	($1,951,694)	($567,000)	($567,000)	($567,000)	($3,652,694)	($3,361,739)
Total benefits	$0	$6,714,663	$6,714,663	$6,714,663	$20,143,988	$16,698,372
Net benefits	($1,951,694)	$6,147,663	$6,147,663	$6,147,663	$16,491,294	$13,336,633
ROI						397%
Payback period						<6 Months

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Analysis Of Benefits

QUANTIFIED BENEFIT DATA AS APPLIED TO THE COMPOSITE

Total Benefits

REF.	BENEFIT	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Atr	Faster time-to-market	$786,888	$786,888	$786,888	$2,360,663	$1,956,873
Btr	Admin, Reporting, and Meeting Efficiencies	$1,285,200	$1,285,200	$1,285,200	$3,855,600	$3,196,102
Ctr	Resource utilization	$1,190,700	$1,190,700	$1,190,700	$3,572,100	$2,961,095
Dtr	Project productivity	$1,890,000	$1,890,000	$1,890,000	$5,670,000	$4,700,150
Etr	Time card savings for users	$1,160,250	$1,160,250	$1,160,250	$3,480,750	$2,885,370
Ftr	Capital Efficiency	$401,625	$401,625	$401,625	$1,204,875	$998,782
	Total benefits (risk-adjusted)	$6,714,663	$6,714,663	$6,714,663	$20,143,988	$16,698,372

The table above shows the total of all benefits across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the composite organization expects risk-adjusted total benefits to be a PV of nearly $16.7 million.

Benefit 1: Faster Time-To-Market

ServiceNow ITBM provides a platform that connects leaders and the business to inform the strategic planning process. Through a series of interviews and a survey, Forrester learned that companies that adopted ServiceNow ITBM were able to:

- Improve the strategic alignment of projects by having greater visibility into the business and customer demands as well as a better understanding of in-flight projects.

  For one interviewed company, this meant not just completing projects on time and on budget, but delivering business outcomes aligned with the customers' needs. "One of the biggest benefits of ServiceNow PPM is to be able to look at demands from different ways, so they can empower the business to make decision ultimately providing your customers more value."
- Allocate resources faster to projects and prioritize projects more effectively based on expected resource availability.
- Reduce the number of projects being requested by business partners and enable them to filter projects out of the pipeline much earlier in the planning process.

With ServiceNow ITBM, the composite organization experiences a reduction in the amount of time screening and approving projects. Forrester assumes that:

- On average, the time to intake, prioritize, and approve projects through the composite's governance process decreases by 11%.
- The composite also experiences a 12% decrease in the time to allocate resources to projects after they were approved.
- The composite organization achieves an average 15% return on its project investments. With $10.5 million invested every year, the 23% improvement in speed of project completion drives an incremental added value of $925,750.



Organizations experienced a 23% increase in faster time-to-market.

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The faster time-to-market may vary because:

- Variability in existing governance processes prior to adopting ServiceNow may yield higher or lower improvements in time-to-value.
- The average annual spend on project cost may vary from year to year depending on demand.
- The average project ROI can vary from year to year and project to project depending on the investment opportunities being undertaken.

To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year risk-adjusted total PV of $1,956,873.

Impact risk is the risk that the business or technology needs of the organization may not be met by the investment, resulting in lower overall total benefits. The greater the uncertainty, the wider the potential range of outcomes for benefit estimates.

Benefit 1: Faster Time-To-Market: Calculation Table

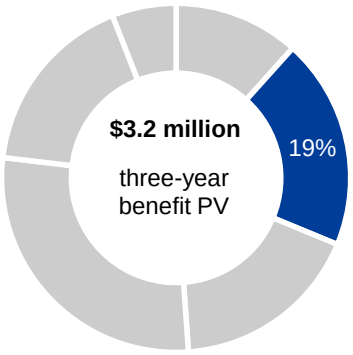
REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
A1	Increased speed in screening and approving projects	Input	11%	11%	11%
A2	Reduced time to allocate resources to projects	Input	12%	12%	12%
A3	Percent of time removed in project planning process	A1+A2	23%	23%	23%
A4	Total project spend per year	Assumption	10,500,000	10,500,000	10,500,000
A5	Average three-year project ROI	Assumption	15%	15%	15%
A6	Annual average project return	A4*(1+A5)/3	4,025,000	4,025,000	4,025,000
At	Faster time-to-market	A3*A6	$925,750	$925,750	$925,750
	Risk adjustment	↓15%			
Atr	Faster time-to-market (risk-adjusted)		$786,888	$786,888	$786,888

Benefit 2: Admin, Reporting, And Meeting Efficiencies

A primary need for all the interviewed and surveyed organizations was to implement a PPM solution that provided greater visibility into the performance of projects. ServiceNow ITBM equipped project managers with reporting and time-tracking capabilities that not only gave them the visibility to project performance they needed but saved them hours of time managing projects, performing day-to-day admin activities, and creating monthly reports and reporting roll-ups for leadership. Furthermore, the solution enabled them to reduce the number of recurring monthly meetings by enabling the business and IT leaders to self-serve reports on demand.

Forrester assumes that the composite organization:

- Saves 8 hours per month per project by PMs in creating reporting and other admin activities.
- Saves 10 hours per month per project by PMs and meeting attendees in not having to prepare or join recurring monthly meetings.
- Undertakes 20 projects per year on average supported by ServiceNow ITBM.
- Has an average resource cost of $50 per hour ($100,000 per year), fully burdened.



Admin, reporting, and meeting efficiencies: **19%** of total benefits

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The reduction in admin, reporting, and meeting time will vary with:

- The number of pre-existing meetings prior to adopting ServiceNow ITBM.
- The average annual or hourly resource rate.
- The number of projects undertaken each year, as this can vary from year to year based on business needs.

To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year risk-adjusted total PV of $3,196,102.

Benefit 2: Admin, Reporting, And Meeting Efficiencies: Calculation Table

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
B1	Administrative and reporting efficiencies per project	8 hours*12 months	96	96	96
B2	Meetings hours saved per project	10 hours*12 months	120	120	120
B3	Number of projects per year	Input	140	140	140
B4	Average hourly rate, fully loaded	$100,000/2,000 hrs	$50.00	$50.00	$50.00
Bt	Admin, reporting, and meeting efficiencies	(B1+B2)*B3*B4	$1,512,000	$1,512,000	$1,512,000
	Risk adjustment	↓15%			
Btr	Admin, reporting, and meeting efficiencies (risk-adjusted)		$1,285,200	$1,285,200	$1,285,200

Benefit 3: Resource Utilization

Resource management is a critical part of a PM's and resource manager's role and is critical to keeping projects on task, on time, and under budget. Both interviewed organizations and many of the surveyed companies reported that ServiceNow ITBM enabled them to improve visibility into resource activities, resource capacity, and resource availability. Furthermore, having the ability to look at resource capacity across multiple projects enabled PMs to plan their project demands accordingly and shift resources from project to project based on availability. This was a key benefit for companies adopting ServiceNow ITBM.

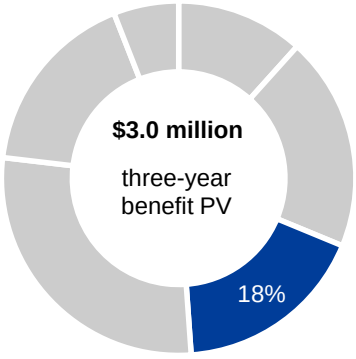
Forrester assumes that the composite organization:

- Experiences a 12.6% improvement in resource utilization, enabling it to complete projects more cost-effectively.
- Undertakes 140 projects per year on average supported by ServiceNow ITBM.
- Experiences an average cost or investment in each project of $75,000.

The increase in resource utilization will vary with:

- The existing inefficiencies in resource management.
- The number of projects undertaken each year, as this can vary from year to year based on business needs.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year risk-adjusted total PV of $2,961,095.



Resource utilization: **18%** of total benefits

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Benefit 3: Resource Utilization: Calculation Table					
REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
C1	Average number of projects per year		140	140	140
C2	Average cost per project		$75,000	$75,000	$75,000
C3	Annual reduction in project cost due to improved resource utilization		12.6%	12.6%	12.6%
Ct	Resource utilization	C1*C2*C3	$1,323,000	$1,323,000	$1,323,000
	Risk adjustment	↓10%			
Ctr	Resource utilization (risk-adjusted)		$1,190,700	$1,190,700	$1,190,700

Benefit 4: Project Productivity

Having the right resources on a project at the right time can improve the overall productivity of a project and ensure it delivers the desired outcome. It can also reduce the amount of rework required for projects. One customer discussed the savings the organization experienced in the testing process, where ServiceNow ITBM enabled the company to reduce the amount of rework typically experienced with these projects by two weeks for 25 FTEs.

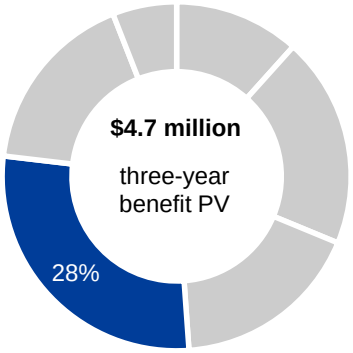
Forrester assumes that the composite organization:

- Experiences a 10% reduction in the average amount of rework required for each project.
- Experiences an additional 10% productivity improvement across projects by having the right skill sets on the project at the right time, reducing delays and project downtime.

The improvement in project productivity will vary with:

- The average amount of project rework and resource inefficiency prior to adopting ServiceNow ITBM.
- The number of projects undertaken each year, as this can vary from year to year based on business needs.
- The average cost per project, as this can vary based on the size and scale of projects.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year risk-adjusted total PV of $4,700,150.



Project productivity: **28%** of total benefits

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Benefit 4: Project Productivity: Calculation Table					
REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
D1	Improved productivity on projects		10%	10%	10%
D2	Reduced rework on projects		10%	10%	10%
D3	Average number of projects per year		140	140	140
D4	Average cost per project		$75,000	$75,000	$75,000
Dt	Project productivity	(D1+D2)*D3*D4	$2,100,000	$2,100,000	$2,100,000
	Risk adjustment	↓10%			
Dtr	Project productivity (risk-adjusted)		$1,890,000	$1,890,000	$1,890,000

Benefit 5: Time Card Savings For Users

One of the modules included in ServiceNow's ITBM offering is the Time Card/Sheet capability. This is an important capability for PMs to understand which resources are working on which activities, and to ensure they are tracking against their allocated time and budget. Prior to adopting ServiceNow ITBM, users typically did this time tracking in spreadsheets on a weekly basis and sent them to PMs who had to consolidate the hours into their reporting. This process was inefficient for both PMs and project team members. With ServiceNow, users were able to save on average 30 minutes per week in time-tracking activities.

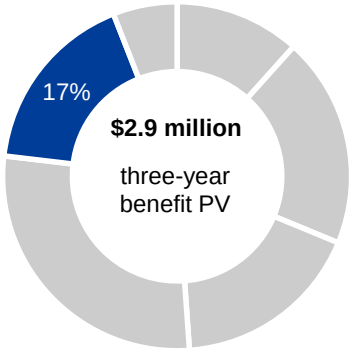
For the composite organization, Forrester assumes that:

- In total, 1,050 ServiceNow users track their time, including PMs.
- Users save 30 minutes per week in time tracking activities.
- The average resource cost is $50 per hour ($100,000 per year), fully burdened.

The reduction in time-tracking effort will vary with:

- The previously existing solution utilized for time tracking as compared to ServiceNow ITBM.
- The average annual or hourly resource rate.

To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year risk-adjusted total PV of $2,885,370.



Time card savings for user: **17%** of total benefits

Benefit 5: Time Card Savings For Users: Calculation Table					
REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
E1	Number of ServiceNow PPM Users	Assumption	1,050	1,050	1,050
E2	Hours saved per week with ServiceNow Timecards	30 minutes*52 weeks/60 minutes	26	26	26
E3	Average hourly rate, fully loaded	$100,000/2,000 hrs	$50.00	$50.00	$50.00
Et	Time card savings for users	E1*E2*E3	$1,365,000	$1,365,000	$1,365,000
	Risk adjustment	↓15%			
Etr	Time card savings for users (risk-adjusted)		$1,160,250	$1,160,250	$1,160,250

Benefit 6: Capital Efficiency

The overall benefits of ServiceNow ITBM speed up the time to deliver projects and enable organizations to deliver more business-aligned output for the same amount of capital investment. This is called increased capital efficiency. Interviewed customers stated that prior to adopting ServiceNow ITBM, they had so many inefficiencies in their demand planning, project management, and delivery processes that projects were constantly delayed and required more budget to fully deliver. Furthermore, some projects were not even reaching completion, and by the end of the fiscal year, capital investment dollars had been left on the table or went unused. However, with ServiceNow ITBM, organizations were able to speed up their delivery processes, completing more projects on time and under budget. This meant they could fully execute on the capital appropriations for projects at the beginning of the fiscal year and capture the return on those investments.

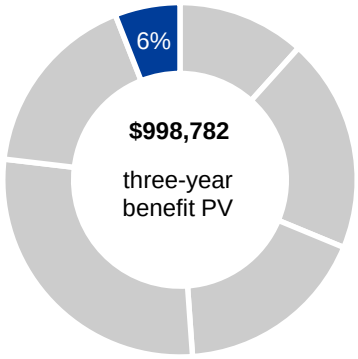
Forrester assumes that the composite organization:

- Increases its capital efficiency by 30% per year.
- Achieves an average 15% return on its project investments, with $10.5 million being invested every year.

The increase in capital efficiency will vary with:

- The amount of money being left on the table prior to adopting ServiceNow ITBM.
- The average annual spend on project cost, as this can vary from year to year based on business needs.
- The average project ROI, as this can vary from year to year and project to project depending on the investment opportunities being undertaken.

To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year risk-adjusted total PV of $998,782.



Capital efficiency: **6%** of total benefits

Benefit 6: Capital Efficiency: Calculation Table

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
F1	Total project spend per year		$10,500,000	$10,500,000	$10,500,000
F2	Average three-year project ROI		15%	15%	15%
F3	Increased capital usage		30%	30%	30%
Ft	Capital efficiency	F1*F2*F3	$472,500	$472,500	$472,500
	Risk adjustment	↓15%			
Ftr	Capital efficiency (risk-adjusted)		$401,625	$401,625	$401,625

Flexibility

The value of flexibility is clearly unique to each customer, and the measure of its value varies from organization to organization. There are multiple scenarios in which a customer might choose to implement ITBM and later realize additional uses and business opportunities, including:

Flexibility, as defined by TEI, represents an investment in additional capacity or capability that could be turned into business benefit for a future additional investment. This provides an organization with the "right" or the ability to engage in future initiatives but not the obligation to do so.

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- **Synergies with ServiceNow ITSM experienced after adopting ITBM.** Many of the interviewed and surveyed organizations had already implemented ServiceNow's service management solution. These organizations identified synergies with ITBM once deployed. For example, organizations could utilize service tickets and issues tracking to inform the project demand pipeline and provide an overall feedback loop from customer identification through issue resolution and project completion. One customer stated, "The benefits we have experienced with adopting the Service Catalog came from helping us funnel work and really get the appropriate request into the project space." The customer went on to say that in the first year, the organization saw a reduction of 66% in projects coming through as they were vetted out before getting to information services (IS). Overall, this synergy better aligns project capital with customer demand.
- **ServiceNow ITBM Agile Development supports agile delivery methodology, helping delivery teams improve efficiency by 35% to 40%.** While the interviewed customers were still utilizing Agile in a proof of concept, initial results were strong. Teams reported the ability to turn out more work per hour by over 35%. Furthermore, they increased their ability to meet customer expectations from 50% – 60% to 90% - 95%. The director of strategic program at a healthcare organization said, "Collectively, the five resources are turning out 35% to 40% more development work just because we're utilizing the process, we're utilizing the tools, and applications out of the box."

Flexibility would also be quantified when evaluated as part of a specific project (described in more detail in Appendix A).

Analysis Of Costs

QUANTIFIED COST DATA AS APPLIED TO THE COMPOSITE

Total Costs

REF.	COST	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
	Implementation and subscription costs (risk-adjusted)	$1,951,694	$567,000	$567,000	$567,000	$3,652,694	$3,361,739

Implementation And Subscription Costs

Implementation for the composite organization took approximately five months. More time went into the initial planning, POC, and configuration of the ServiceNow ITBM solution than the actual deployment itself. Overall, there were three types of costs incurred in the deployment: professional services, internal labor, and training.

The ServiceNow ITBM subscription fee is fairly straightforward. The composite organization incurred a three-year total PV of $1,410,045.

These implementation and subscription costs can vary based on:

- The number of users the solution is being deployed to.
- The amount of time spent planning and configuring the ServiceNow ITBM solution, based on the size of the deployment and number of groups it's rolled out to.

To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year risk-adjusted total PV of $3,361,739.

The table above shows the total of all costs across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the composite organization expects risk-adjusted total costs to be a PV of $3,361,739.



Five months
Total implementation and deployment time

Implementation risk is the risk that a proposed investment may deviate from the original or expected requirements, resulting in higher costs than anticipated. The greater the uncertainty, the wider the potential range of outcomes for cost estimates.

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ServiceNow ITBM: Overview

The following information is provided by ServiceNow. Forrester has not validated any claims and does not endorse ServiceNow or its offerings.



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Appendix A: Total Economic Impact

Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

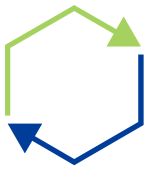
Total Economic Impact Approach



Benefits represent the value delivered to the business by the product. The TEI methodology places equal weight on the measure of benefits and the measure of costs, allowing for a full examination of the effect of the technology on the entire organization.



Costs consider all expenses necessary to deliver the proposed value, or benefits, of the product. The cost category within TEI captures incremental costs over the existing environment for ongoing costs associated with the solution.



Flexibility represents the strategic value that can be obtained for some future additional investment building on top of the initial investment already made. Having the ability to capture that benefit has a PV that can be estimated.



Risks measure the uncertainty of benefit and cost estimates given: 1) the likelihood that estimates will meet original projections and 2) the likelihood that estimates will be tracked over time. TEI risk factors are based on "triangular distribution."

The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1 that are not discounted. All other cash flows are discounted using the discount rate at the end of the year. PV calculations are calculated for each total cost and benefit estimate. NPV calculations in the summary tables are the sum of the initial investment and the discounted cash flows in each year. Sums and present value calculations of the Total Benefits, Total Costs, and Cash Flow tables may not exactly add up, as some rounding may occur.



Present value (PV)

The present or current value of (discounted) cost and benefit estimates given at an interest rate (the discount rate). The PV of costs and benefits feed into the total NPV of cash flows.



Net present value (NPV)

The present or current value of (discounted) future net cash flows given an interest rate (the discount rate). A positive project NPV normally indicates that the investment should be made, unless other projects have higher NPVs.



Return on investment (ROI)

A project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits less costs) by costs.



Discount rate

The interest rate used in cash flow analysis to take into account the time value of money. Organizations typically use discount rates between 8% and 16%.



Payback period

The breakeven point for an investment. This is the point in time at which net benefits (benefits minus costs) equal initial investment or cost.

The Forrester Wave™: Strategic Portfolio Management Tools, Q3 2017

Six Leaders Provide Agile Tools To Drive Digital Transformation

by Margo Visitacion and Robert Stroud

September 20, 2017

Why Read This Report

In our 27-criteria evaluation of strategic portfolio management (SPM) software solutions providers, we identified the 13 most significant ones — AgileCraft, CA, Changepoint, Decision Lens, GenSight, MEGA, Microsoft, Planisware, Planview, ServiceNow, Software AG, Sopheon, and StrategyBlocks — and researched, analyzed, and scored them. This report shows how each provider measures up and helps enterprise architecture (EA) and portfolio management office (PMO) professionals make the right choice.

Key Takeaways

Software AG, Planisware, Sopheon, ServiceNow, Planview, And GenSight In Front

Forrester's research uncovered a market in which Software AG, Planisware, Sopheon, ServiceNow, Planview, and GenSight lead the pack. AgileCraft, Microsoft, MEGA, CA, Decision Lens, and StrategyBlocks offer competitive options. Changepoint is a Contender.

EA And PMO Pros Are Looking For Analytics Insights, Collaboration, And Practical Usability

The SPM market is growing because more EA and PMO professionals see SPM as a way to address their top challenges in continuous planning. They trust SPM to deliver seamless traceability from strategy through execution.

Analytics Insights And Integrated Business Technology Planning Are Key Differentiators

As organizations become increasingly Agile, EA and PMO pros require technology that supports insights-driven planning that uses data to help them make smarter decisions in compressed planning cycles. Vendors that can combine Agile and sequential planning capabilities in a highly collaborative fashion with a strong user experience will differentiate.

The Forrester Wave™: Strategic Portfolio Management Tools, Q3 2017

Six Leaders Provide Agile Tools To Drive Digital Transformation

by Margo Visitacion and Robert Stroud
with Alex Cullen, Matthew Flug, and Sam Bartlett

September 20, 2017

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SPM Tools Are Essential In Digital Transformation

Digital transformation challenges the way companies plan and deliver products and services to their customers. Speed is a prerequisite. Getting the most value while keeping waste to a minimum illustrates that companies need a portfolio-centered approach to both strategic planning and product delivery because:

- **Planning disciplines are transitioning from annual to continuous.** Organizational structures change to maximize throughput via data-driven, action-oriented feedback. In a world of digital transformation, the concept of project portfolio management (PPM) provides too narrow of a focus. With organizations increasingly embracing Agile planning and delivery methods, they must get away from bottom-up, departmental, budget-based project planning, which enforces silos that impede true business agility.
- **SPM tools support planning at a unified level.** Organizations can view investments through various lenses that leverage features, integration, and implementation best practices to create traceability from corporate strategic planning. This is done through strategic portfolio road mapping that guides program and product planning and delivery. SPM delivers insight by compiling and translating strategic plans into portfolios, leveraging insight from internal and external data sources to provide a look into investment strategies from various perspectives, including capabilities, products, programs, applications, and projects. The solution leverages robust business analysis, capacity planning, and predictive analytics capabilities that support investment decisions.
- **SPM underpins organizations' embrace of Agile planning.** Seventy-one percent of organizations use Agile techniques to deliver at least some of the time.[1] Digital transformation and customer-centered strategies bring a new set of challenges to today's organizations. Accelerated planning and delivery practices are needed to meet customer demand and to provide fast feedback to guide funding and prioritization decisions.

The Strategic Portfolio Management Tools Landscape Is Shaped By Diverse Elements

In assessing the SPM tools landscape, buyers should recognize the following market characteristics related to technology, industry segmentation, and business innovation:

- **Digital transformation requires integration of business and technology planning.** The voice of the customer and the increased digitalization of business compress the cycle of planning. Discrete strategic planning, design, development, and delivery practices no longer work efficiently as organizations put the customer in the center of their planning processes.[2] This changes the picture of planning — market data is still important, but it's no longer paramount. Organizations now need a mixture of customer information and market research to help them identify markets. And as more organizations adopt design thinking in introducing products and services, technology planning becomes a concurrent exercise, requiring the introduction of a unified view of how business products, domains, and capabilities drive technology innovation.[3]

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- **Contextual collaboration and analysis form a key part of strategic planning.** Strong traceability requires greater levels of transparency. Spending on business technology (BT) now makes up 55% of new project spending, outpacing traditional IT.[4] These investments target customer-facing capabilities that are continuously delivered. Agile techniques require fast feedback, and with planning cycles becoming shorter, discrete dissemination of information no longer supports fast planning and delivery cycles. Companies now need to collaborate within the context of planning and delivery cycles, and they need valid feedback to support reprioritization to maintain their competitive advantage.
- **Company size, geography, and industry segmentation drive vendor market strategies.** While "Agile" is the word on every executive's lips, specific industry requirements, their ability to invest, and geographic footprint are three factors that drive buying decisions. Large, global companies require broader, global capabilities and more robust planning and analytics features, while midsize companies demand straightforward, practical features that they can implement and see value from quickly. Core competencies don't vary from industry to industry, but value-added capabilities such as predefined content and services do. As we see demand for insights-driven analytics, predictive analytics is quickly becoming table stakes for capacity planning and long-term financial projections.

Strategic Portfolio Management Tools Evaluation Overview

To assess the state of the strategic portfolio management tools market and see how the vendors stack up against each other, Forrester evaluated the strengths and weaknesses of top strategic portfolio management tools vendors. After examining past research, user need assessments, and vendor and expert interviews, we developed a comprehensive set of evaluation criteria. We evaluated vendors against 27 criteria, which we grouped into three high-level buckets:

- **Current offering.** Each vendor's position on the vertical axis of the Forrester Wave graphic indicates the strength of its current offering. Our evaluation of a vendor's current offering focused on the integration of strategic planning capabilities, including goals, assessment, decision support, validation, gap analysis, and collaboration. We also included portfolio management capabilities such as alignment, integrated operational alignment, portfolio analytics, and data security. Finally, we focused on usability capabilities that include services and programs to drive customer success and practical usability that brings office collaboration into the product.
- **Strategy.** The strategy position on the horizontal axis of the Forrester Wave graphic shows our assessment of each vendor's strategy. We evaluated the product strategy, partner ecosystem, corporate strategy, go-to-market strategy, and entry price.
- **Market presence.** The bubble size of each vendor on the Forrester Wave graphic demonstrates its market presence. We assessed market presence based on company revenue, the number of new customers and subscription renewals, and the number of employees focused on the strategic portfolio management market.

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Evaluated Vendors And Inclusion Criteria

Forrester included 13 vendors in the assessment: AgileCraft, CA, Changepoint, Decision Lens, GenSight, MEGA, Microsoft, Planisware, Planview, ServiceNow, Software AG, Sopheon, and StrategyBlocks. Each of these vendors has (see Figure 1):

- **A minimum of 50 live strategic portfolio management customers.** The vast majority of today's market is PPM customers. To qualify for inclusion, we required a minimum of 50 active SPM customers as of May 25, 2017.
- **Flexible implementation requirements.** Companies have different requirements for storing strategic data. Vendors had to demonstrate software-as-a-service (SaaS) or on-premises implementation capabilities in public and private settings.
- **A comprehensive set of strategic portfolio management capabilities.** The functional breadth of an SPM offering must include core features of strategic business and technology planning on a global level, core portfolio management capabilities, and integration support to bring in necessary external strategic and performance data for assessment, prioritization, and choice.

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FIGURE 1 Evaluated Vendors: Vendor Information And Inclusion Criteria

Vendor	Product evaluated	Product version evaluated
AgileCraft	AgileCraft Scaled Agile Management Platform	
CA	CA Project & Portfolio Management	15.2
Changepoint	barometerIT	
Decision Lens	Decision Lens	
GenSight	GenSight	9.3
MEGA	HOPEX	
Microsoft	Microsoft Project & Portfolio Management	
Planisware	Planisware	
Planview	Planview Enterprise	
ServiceNow	IT Business Management	Jakarta
Software AG	Alfabet	
Sopheon	Accolade	11.1
StrategyBlocks	StrategyBlocks	

Vendor inclusion criteria

A minimum of 50 live strategic portfolio management customers. The vast majority of today's market consists of project portfolio management customers. To qualify for inclusion, we required a minimum of fifty active strategic portfolio management (SPM) customers as of May 25, 2017.

Flexible implementation requirements. Companies have different requirements for storing strategic data. Vendors had to demonstrate the ability to implement in public and private software-as-a-service or on-premises implementation capabilities.

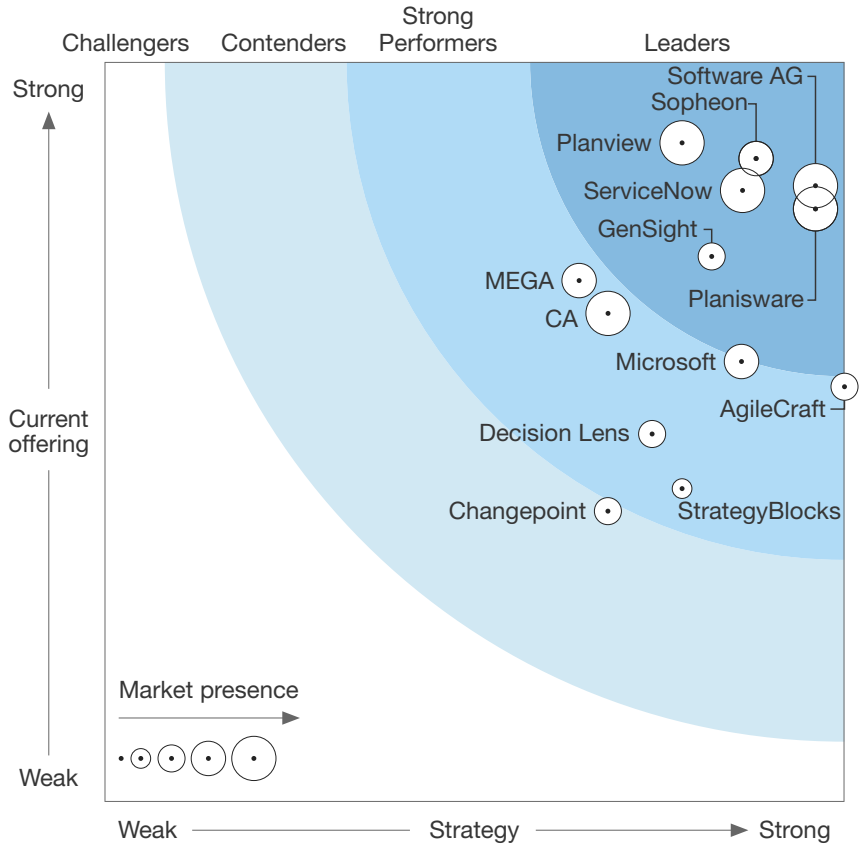
A comprehensive set of strategic portfolio management capabilities. The functional breadth of an SPM offering must include core features of strategic business and technology planning on a global level, core portfolio management capabilities, and integration support to bring in necessary external strategic and performance data for assessment, prioritization, and choice.

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Vendor Profiles

This evaluation of the strategic portfolio management tools market is intended to be a starting point only. We encourage clients to view detailed product evaluations and adapt criteria weightings to fit their individual needs through the Forrester Wave Excel-based vendor comparison tool (see Figure 2).

FIGURE 2 Forrester Wave™: Strategic Portfolio Management Tools, Q3 '17



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The Forrester Wave™

Go to Forrester.com to download the Forrester Wave tool for more detailed product evaluations, feature comparisons, and customizable rankings.

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FIGURE 2 Forrester Wave™: Strategic Portfolio Management Tools, Q3 '17 (Cont.)

	Forrester's weighting	AgileCraft	CA	Changepoint	Decision Lens	GenSight	MEGA	Microsoft	Planisware	Planview	ServiceNow	Software AG	Sopheon	Strategy Blocks
Current offering	50%	2.80	3.30	1.96	2.48	3.68	3.52	2.97	4.00	4.45	4.12	4.16	4.34	2.11
Strategic planning support	15%	2.50	3.00	3.10	4.10	4.10	3.80	2.70	3.60	3.90	3.70	3.70	3.90	3.20
Portfolio management	10%	3.00	2.50	3.80	2.45	3.65	3.05	3.10	3.10	4.25	4.30	4.25	3.20	2.45
Integrated risk management	10%	2.00	3.00	3.00	3.00	4.00	5.00	2.00	3.00	4.00	3.00	4.00	5.00	3.00
Financial management	10%	3.60	3.30	0.00	2.30	4.30	3.70	2.00	4.00	4.70	3.60	4.30	4.00	3.00
Resource capacity planning	10%	3.00	5.00	0.00	4.00	4.00	3.00	2.00	5.00	5.00	4.00	4.00	4.00	0.00
Program/product management	15%	5.00	3.00	0.00	1.00	3.00	3.00	3.00	5.00	5.00	5.00	5.00	5.00	1.00
Customer experience	15%	2.40	3.80	2.40	2.60	3.80	1.80	3.00	5.00	3.80	3.80	3.00	4.20	1.20
Integration support	15%	1.00	3.00	3.00	1.00	3.00	5.00	5.00	3.00	5.00	5.00	5.00	5.00	3.00
Strategy	50%	5.00	3.40	3.40	3.70	4.10	3.20	4.30	4.80	3.90	4.30	4.80	4.40	3.90
Product strategy	20%	5.00	3.00	3.00	3.00	3.00	3.00	5.00	5.00	3.00	5.00	5.00	3.00	3.00
Partnership ecosystem	10%	5.00	5.00	5.00	3.00	0.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Corporate strategy	25%	5.00	3.00	3.00	5.00	5.00	3.00	5.00	5.00	3.00	3.00	5.00	5.00	5.00
Go-to-market strategy	35%	5.00	3.00	3.00	3.00	5.00	3.00	3.00	5.00	5.00	5.00	5.00	5.00	3.00
Entry price	10%	5.00	5.00	5.00	5.00	5.00	3.00	5.00	3.00	3.00	3.00	3.00	3.00	5.00
Market presence	0%	2.80	4.80	3.00	2.60	2.80	3.80	4.00	4.20	4.20	4.60	5.00	3.20	2.00
Installed base	40%	4.50	4.50	3.00	4.00	4.50	5.00	2.50	5.00	5.00	4.00	5.00	4.50	3.50
Revenue	40%	1.00	5.00	2.00	1.00	2.00	2.00	5.00	3.00	3.00	5.00	5.00	2.00	1.00
Employees	20%	3.00	5.00	5.00	3.00	1.00	5.00	5.00	5.00	5.00	5.00	5.00	3.00	1.00

All scores are based on a scale of 0 (weak) to 5 (strong).

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Leaders

- **Software AG.** Software AG was founded in 1969 and entered technology strategic planning via its acquisition of Alfabet in 2013. The company's largest client segments include energy, logistics, and financial services. The vendor has a global presence and an extensive partner network. Taking a business technology approach, Software AG has significantly expanded its portfolio planning and delivery capabilities to include both traditional and Agile capabilities and is prepared for the European Union's General Data Protection Regulation (GDPR). Customers referenced the ability to better tie investments to capabilities in order to deliver on their strategic portfolios.
- **Planisware.** Planisware, founded in 1996, is a global provider of portfolio management capabilities targeting product development, engineering, and research and development. The company's largest client segments include life sciences, manufacturing, energy, food and beverage, and consumer product goods. Planisware is among the leading vendors and provides ample support in all capabilities, with investment planning, program, and road map capabilities highlighted as particular strengths. Clients referenced flexible resource management, strong financial planning, and the ability to manage hybrid — traditional and Agile — projects as differentiators.
- **Sopheon.** Founded in 1993, Sopheon is a global SPM vendor headquartered in the US with operating units in the UK, Darmstadt, Germany, and the Netherlands. Possessing a robust business and product focus, its largest client segments are in consumer products, food and beverage, high tech and electronics, chemical and coatings, industrial manufacturing, and aerospace and defense. Sopheon is one of the leading vendors, with a broad range of support in all of its areas of focus, but the vendor is particularly strong in innovation planning, financial controls, and process management. Clients highlighted strong technical and process support and usability as key strengths.
- **ServiceNow.** Founded in 2004, ServiceNow is a global cloud computing company offering enterprise software. ServiceNow's recently introduced Jakarta release leverages a common platform, a configuration management database, and resource capabilities to align strategy with critical business and technology services, programs, and applications. The company's largest client segments are financial services, healthcare, higher education, life sciences, and government. Clients talked about the common platform, flexible workflow, and configurability as prominent features that helped them to deliver on strategic technology portfolios.
- **Planview.** Planview, founded in 1989, has grown through acquisitions of Projectplace (in 2014), a collaborative work management vendor, Troux (in 2015), an enterprise architecture vendor, and Innotas (in 2016), a midmarket project portfolio management vendor. The vendor has a strong US presence and is expanding its global presence. Planview's largest client segments are financial services, manufacturing, and business services. The vendor provides comprehensive capabilities in areas of corporate strategic planning and enterprise-level portfolio management that encompasses corporate finance, product, services, and IT capabilities. Clients noted the ability to consolidate their strategic views, product and program delivery, and flexible workflows.

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› **GenSight.** GenSight was founded in 2002. With locations in the US and UK, the vendor's largest client segments are consumer products, industrial products, and science and technology. Of the Leaders, GenSight is the most strategically focused, targeting corporate, product, and enterprise portfolio planning. The product offers robust capabilities in all areas of strategic planning and portfolio management and supports flexible integration with third-party solutions for data analysis. Clients highlighted product support, ease of use, and financial analysis strengths as differentiators.

Strong Performers

› **AgileCraft.** Founded in 2013, AgileCraft is one of the first strategic portfolio management solutions designed for Agile at scale. AgileCraft employs a horizontal strategy to serve cross-industry needs. The vendor supports both top-down strategic product planning and delivery capabilities, providing straightforward budgeting and capacity planning in a highly usable UI. In addition, AgileCraft supports the ability to manage traditional investment workstreams concurrently with Agile release trains. Clients referenced data aggregation and delivering business metrics as particular key strengths.

› **Microsoft.** Microsoft, founded in 1974, delivers Microsoft Project & Portfolio Management, a collaborative, cloud-based project portfolio management solution. Its cross-industry strategy, tight integration with Office 365, and robust mobile solution help a wide range of organizations work together. Core functionality remains focused on project portfolio management that enables delivery functions. Clients mentioned easy project planning and collaboration as the most beneficial features; they pointed to strategic planning as an area for improvement, however. Future enhancements will focus on expanding different approaches to work with native Agile planning, integration with Microsoft Planner, and a new portfolio service.

› **MEGA.** Founded in France in 1991, the vendor has expanded to nine countries and a worldwide network of distributors and partners. MEGA's largest client segments are government and financial services. MEGA's HOPEX product leverages its strong enterprise architecture capabilities and application portfolio management as the foundation for planning to build alignment between business and technology capabilities; today, resource management capabilities require a separate PPM solution. Clients referenced ease of use, a common taxonomy, and analysis as key attributes that enable them to mature their planning processes.

› **CA.** CA was founded in 1976 and acquired its project portfolio management solution in 2005. CA PPM has a significant presence in the global technology PPM market in financial services, government, pharmaceutical, insurance, and telecom markets. The core functionality is strongest, but the product's flexible configurability enables users to extend functionality to a more strategic level. Improved data management capabilities allow for stronger analysis. Clients highlighted ideation, demand management, and using storyboards for executive reporting as particular strengths.

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- **Decision Lens.** Founded in 2002, Decision Lens delivers a strategic portfolio management solution that emphasizes decision-making capabilities. Its largest client segments are government, aerospace and defense, and technology. Leveraging decision science and the analytic hierarchy process, the product supports collaborative strategic planning through building consensus in a highly configurable, user-friendly format. Users are guided through tradeoff and scenario analysis to identify optimized portfolios. Clients mentioned a strong mobile solution for anytime analysis and voting, using it primarily in decision making and reporting versus ongoing portfolio management. At this time, integrations are limited, but future releases should bring more out-of-the-box integrations and enhanced resource optimization.
- **StrategyBlocks.** This vendor, with offices in New Zealand and the United Kingdom, offers a flexible SaaS-based strategic planning solution applicable across a wide number of industries. The product, targeted at the C-suite or senior executives, offers the ability to quickly build visual analysis of a strategy, identify outcomes, and cascade metrics to monitor outcomes in a series of blocks that can be aligned horizontally or vertically. Clients highlighted the solution's ease of use, ability to easily identify risks and activities within blocks, and establishing relationships between blocks to identify dependencies. The tool is generally used as a standalone; future releases will include an expanded metrics module, ideation, and execution capabilities.

Contenders

- **Changepoint.** Changepoint, founded in 1992, acquired barometerIT, an enterprise architecture solution, in 2015. The US-based organization's global customer base crosses multiple industries, including professional services and healthcare. barometerIT is a simple-to-use solution to identify strategies, organizations, capabilities, and data in support of strategic planning. Flexible, graph-driven data analysis and pivoting provide users with insights into various perspectives of strategies. Clients spoke of strong collaboration, workflow, and advanced analytics as benefits. barometerIT can be implemented as a standalone solution; for full strategic portfolio management capabilities, however, potential clients should consider teaming the implementation with Changepoint's Daptiv PPM.

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Supplemental Material

Online Resource

The online version of Figure 2 is an Excel-based vendor comparison tool that provides detailed product evaluations and customizable rankings. Click the link at Forrester.com at the beginning of this report to download.

Data Sources Used In This Forrester Wave

Forrester used a combination of four data sources to assess the strengths and weaknesses of each solution. We evaluated the vendors participating in this Forrester Wave in part using materials that they provided to us prior to September 7.

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- **Hands-on lab evaluations.** Vendors spent one day with a team of analysts that performed a hands-on evaluation of the product using a scenario-based testing methodology. We evaluated each product using the same scenario, creating a level playing field by evaluating every product on the same criteria.
- **Vendor surveys.** Forrester surveyed vendors on their capabilities as they relate to the evaluation criteria. Once we analyzed the completed vendor surveys, we conducted vendor calls where necessary to gather details of vendor qualifications.
- **Product demos.** We asked vendors to conduct demonstrations of their products' functionality. We used findings from these product demos to validate details of each vendor's product capabilities.
- **Customer reference calls.** To validate product and vendor qualifications, Forrester also conducted reference calls with three of each vendor's current customers.

The Forrester Wave Methodology

We conduct primary research to develop a list of vendors that meet our criteria to be evaluated in this market. From that initial pool of vendors, we then narrow our final list. We choose these vendors based on: 1) product fit; 2) customer success; and 3) Forrester client demand. We eliminate vendors that have limited customer references and products that don't fit the scope of our evaluation.

After examining past research, user need assessments, and vendor and expert interviews, we develop the initial evaluation criteria. To evaluate the vendors and their products against our set of criteria, we gather details of product qualifications through a combination of lab evaluations, questionnaires, demos, and/or discussions with client references. We send evaluations to the vendors for their review, and we adjust the evaluations to provide the most accurate view of vendor offerings and strategies.

We set default weightings to reflect our analysis of the needs of large user companies — and/or other scenarios as outlined in the Forrester Wave evaluation — and then score the vendors based on a clearly defined scale. We intend these default weightings to serve only as a starting point and encourage readers to adapt the weightings to fit their individual needs through the Excel-based tool. The final scores generate the graphical depiction of the market based on current offering, strategy, and market presence. Forrester intends to update vendor evaluations regularly as product capabilities and vendor strategies evolve. For more information on the methodology that every Forrester Wave follows, go to http://www.forrester.com/marketing/policies/forrester-wave-methodology.html.

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Endnotes

[1] Source: "PMI's Pulse of the Profession 9th Global Project Management Survey," Project Management Institute, 2017 (https://www.pmi.org/-/media/pmi/documents/public/pdf/learning/thought-leadership/pulse/pulse-of-the-profession-2017.pdf).

[2] Seventy-three percent of survey respondents (business and technology decision makers and influencers whose level of seniority is manager or above) say that they have achieved at least a defined level of maturity in practicing customer-led IT planning. Source: Forrester Data Global Business Technographics® Priorities And Journey Survey, 2017.

[3] Portfolios represent the action plan that delivers on business technology road maps. Business technology domains, capabilities, and services serve as prioritization criteria in making investment decisions. See the Forrester report "Link Strategic Portfolios To BT Road Maps To Win, Serve, And Retain Customers."

[4] Growing consumer spending and business investment keeps CIOs focused on the BT agenda and will fuel the majority of technology investments. See the Forrester report "US Tech Market Outlook For 2017 And 2018: Mostly Sunny, With Clouds And Chance Of Rain."

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Magic Quadrant for Integrated Risk Management Solutions

Published 15 July 2019 - ID G00369371 - 41 min read

By Analysts Jie Zhang, Brian Reed

An IRM strategy reduces siloed risk domains and supports dynamic business decision making via risk-data correlations and shared risk processes. Security and risk management leaders should use this Magic Quadrant to identify technology solutions that support this strategy.

Market Definition/Description

Integrated risk management (IRM) solutions combine technology, processes and data to enable the simplification, automation and integration of strategic, operational and IT risk management across an organization. To understand and manage the full scope of risk, organizations require a comprehensive view across business units and risk and compliance functions, as well as key business partners, suppliers and outsourced entities. As a result, new technology solutions are emerging to increase the collaborative nature of risk management, inside and outside an organization.

An IRM strategy enables an organization to use consistent tools, terminologies and processes across various risk domains relevant to the organization. The scope of an IRM project emphasizes the integration principle across risk-data silos and risk processes.

IRM Use Cases

A growing number of IRM vendors automate various workflows and aggregate risk data in support of cross-organization collaboration for risk management. Through common functions, such as an asset repository, a risk register, compliance requirement and control/policy mapping, survey capabilities, workflow functions and data import/export, risk reporting and analytics, IRM vendors provide capabilities across the three use cases that follow.

Business-Outcome-Centric

Business outcome represents an integration-optimization-based risk practice. It is designed to fully automate the linkage among relevant insights on key corporate-performance-related risks. Performance is the “advanced level” use case that builds on compliance and operation use cases to optimize and tune a complete portfolio of capabilities.

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Resilience represents an adaptability-based risk practice. It is designed to focus on operational and IT risks and offer an agile risk program in response to and recovery from significant business disruptions. Resilience is the “medium level” use case, which extends capabilities to risk mitigation action planning, risk indicator monitoring and mapping, such as the level of automations in risk treatment processes and communication.

Compliance-Centric

Compliance represents a regulation-based risk practice. It is designed to provide evaluation and evidence in support of relevant legal and regulatory requirements. Compliance could be the “basic level” starting use case for most clients seeking to establish a formal risk program and is responsible for core capabilities, such as risk and assessment documentation and regulatory controls monitoring.

IRM Capabilities

In support of these three use cases, IRM critical capabilities provide business leaders with effective means of assessing risk and control effectiveness, identifying risk events, managing remediation efforts, and quantifying the associated risk exposure across the organization. What follows is an overview of the five critical capabilities evaluated in this research, as well as a description of their primary features and functions.

Risk Control and Document/Assessment

Risk statements and the related controls required to mitigate them to an acceptable level must be documented sufficiently to satisfy a number of key internal and external stakeholders. These include regulators, external auditors, business partners and associates, suppliers, senior executives, and board members. Statements and controls must also provide the basis for performing a comprehensive risk assessment at a strategic, operational and technological level. Features of this capability include:

- Risk-related content, including a risk framework, taxonomy/library, key risk indicator (KRI) catalog, and legal, regulatory and organizational compliance requirements
- Risk assessment methodology and calculation capabilities (e.g., bow tie risk assessment)
- Policy documentation and control mapping
- Documentation workflow, including authoring, versioning and approval
- Business impact analysis
- Audit work paper and testing management
- Third-party control evaluation

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Proactive management of risk incidents can lead to a reduction in business impact and inform future risk mitigation efforts. A record of incidents can be used to inform the risk assessment process and facilitate the identification of event causes. In addition, IRM solutions can integrate with external systems to identify potential risk events related to third-party risk profiles and known incidents. Features of this capability include:

- Incident data capture
- Incident management workflow and reporting
- Root cause analysis
- Crisis management
- Investigative case management

Risk Mitigation Action Planning

When risks are assessed to be beyond defined risk tolerance levels, action plans must be developed to ensure that the appropriate mitigation steps are taken to meet the risk appetite set by the board of directors or other governance bodies. IRM solutions can provide support to risk professionals and business leaders in managing and testing the associated risk mitigation efforts. The features of this capability include:

- Project management functionality to track progress on risk-related initiatives, audits or investigations
- Risk control testing capabilities, such as continuous control monitoring
- Control mapping to risks, business processes and technology assets
- Control mapping to legal requirements and compliance mandates

Risk Monitoring and Communication

To effectively monitor risks across the organization, companies can use IRM solutions to aggregate and report a wide array of risk levels using KRIs. Features of this capability include:

- Risk scorecard/dashboard capabilities
- External data integration (e.g., information security vulnerability assessment data)
- The ability to link KRIs to performance metrics

Risk Quantification and Analytics

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of the quantitative analysis is used to support capital calculation requirements driven by regulatory mandates, such as Basel III and Solvency II. Other quantitative analysis methods are used to develop more-precise predictive models to determine the potential for certain operational risk events, such as fraud or theft. As such, the features of this capability include:

- Machine learning or other artificial intelligence (AI)-enabled analytics
- “What if” risk scenario analysis capabilities
- Statistical modeling capabilities (e.g., Monte Carlo simulation, value at risk and Bayesian statistical inference)
- Predictive analytics
- Capital allocation/calculation
- Fraud detection capabilities

Magic Quadrant

Figure 1. Magic Quadrant for Integrated Risk Management Solutions

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Vendor Strengths and Cautions

BWise

On 1 April 2019, after this research had formally started, BWise, a former Nasdaq company, was acquired by SAI Global. Therefore, the two vendors are presented separately.

Headquartered in Den Bosch, Netherlands, BWise can be deployed in a single-tenant-hosted environment or on-premises. BWise has customer distribution in all geographic regions, with a primary concentration in North America, Europe and Australia/New Zealand. Approximately 40% of its customer base is in the financial services sector. Support is provided across the globe;

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- **Geographic Strategy:** BWise maintains a well-balanced presence across major markets, and its brand is especially trusted by large financial customers and its various risk user roles.
- **Product/Service:** BWise offers a consistent dashboard throughout different workflows for different risk domains. The dashboard supports a broad range of easy-to-digest risk content.
- **Integration:** All BWise capabilities are based on a single and common application architecture. Shared common elements allow consistent and seamless workflow and data representation.

Caution

- **Product Roadmap:** As a result of the change of ownership from Nasdaq to SAI Global, BWise will experience uncertainty and changes to management and product development investment.

CAMMS

Headquartered in Adelaide, Australia, CAMMS is a privately held company. Its IRM solution, cammsrisk, serves the company's broader vision of offering the market an enterprise performance management (EPM) solution. In addition to cammsrisk, additional modules, such as cammsinsights, cammsincident (including mobile app), cammsportal and cammsapi, are also evaluated for this research. The solution set is primarily deployed via a SaaS model. CAMMS' top customer vertical industries are government, transportation, health and utilities. Support is provided via an online portal, plus a help desk, which is available via phone 24/7. Its sales teams and main customer base are in Australia, the U.K., Singapore and the U.S.

Strengths

- **Product Strategy:** CAMMS focuses on developing a modern look-and-feel user interface (UI). Ease of use and streamlined integrations among different risk management processes and data sources are most visible in the cammsrisk product set.
- **Market Understanding and Strategy:** CAMMS has grown rapidly in the past few years in customer base and geographic presence. An important pillar of support for this growth is its accurate interpretations of the market direction.
- **Integration:** Cammsrisk offers straightforward API capabilities and risk-data integrations. It supports Power BI, Tableau and other third-party systems for advanced data analytics. Workflow flexibility is reflected in incident management and crisis management.

Cautions

- **Overall Viability:** CAMMS is a newer and smaller vendor, compared with most of the other providers evaluated in this research. For traditional IRM buyers, as well as large-scale

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- **Vertical Industry Strategy:** Although actively developing a more balanced customer base across industries in recent years, CAMMS' customers are concentrated in government and transportation sectors.
- **Implementation:** Because CAMMS does not have a strong presence in traditional risk buying industries, such as financial services and insurance, its risk data and workflow integration implementation experiences for these traditional IRM buying centers are limited.

CURA Software

CURA Software is the group name of the CURA governance, risk and compliance (GRC) product and related companies. CURA Singapore is the holding company for the group (CURA USA, CURASA and CURA Australia). CURA Software has corporate entities and a significant presence in South Africa and Australia. Software development activities are concentrated in India. The evaluated solution, CURA Platform, can be deployed through on-premises, hosted and SaaS models. CURA's top customer vertical industries are the government, manufacturing, financial services and mining sectors. Primary support is provided out of local teams, and critical issues and development are handled by the India team. Most (more than 80%) of its customer base is in South Africa and Australia. CURA Software also has clients in the U.S., Malaysia, South America, the U.K., Singapore and the Middle East.

Strengths

- **Market Understanding:** Within the critical capabilities it supports, CURA Software has articulated a clear view of current market demand, as well as its evolution. It has presented a plan for how its technology will support such market development.
- **Product/Service:** CURA Platform offers a broad range of controls for major frameworks in the security and risk domains, and its task engine facilitates ease of use on incident capturing and risk assessment/monitoring.
- **Integration:** CURA offers open APIs for SAP, Oracle, SharePoint and other third-party systems. Risk data is framework-driven and offers rich, control-based content, especially for specific regulations, such as the General Data Protection Regulation (GDPR).

Cautions

- **Financial Viability:** Although its business in South Africa shows significant organic growth, CURA Software's overall financial growth is not showing the same pattern in other regions.
- **Geographic Distribution:** Despite pursuing a more global sales and support force in recent years, CURA Software's customer base dominates in only two countries (South Africa and Australia).
- **Integration/Implementation:** Based on the customer references included in this research, the

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Dell Technologies (RSA)

Headquartered in Bedford, Massachusetts, RSA is a Dell Technologies business. RSA Archer, evaluated for this research, consists of multiple solutions, including the integrated RSA Archer Platform and separate solutions for enterprise risk management (ERM), audit, business resiliency, third-party risk and others. RSA Archer can be deployed via on-premises, hosted and third-party hosted models, with an approximately 3-to-1 ratio of on-premises versus hosted. Implementation services are available through Dell/RSA professional services and its partners. System integration (SI) and value-added reseller (VAR) services are offered worldwide, while support is provided 24/7 by specialists in the U.S., the U.K., India, Egypt, the Philippines and Australia. RSA Archer has customers across the financial services, healthcare, government, professional services, transportation, telecommunications, retail, energy and technology sectors.

Strengths

- **Geographic Strategy:** RSA Archer has grown its markets (including professional services) outside North America. This is due to increased local staffing in these regions driven by organizations that need technology partners to balance immaturity in risk and compliance management in their organizations.
- **Sales Strategy:** RSA Archer balances the complexity of the product with an Exchange Offering ecosystem. Although other competitors have similar, peer-connected, knowledge-sharing systems, the size and detail of tools, utilities, app-packs and customer interaction are strengths of the sales function.
- **Integration:** RSA Archer's data model design produces a multilevel risk catalog from IT to enterprise risk that supports quantitative risk value inputs for multiple risk management domains.

Cautions

- **Time to Value:** Although a mature platform, RSA Archer is still not ready for out-of-the-box functionality in smaller organizations — customization time of user experience (UX) can be expected to be proportional to roles using the platform.
- **Deployment Model**: RSA Archer is primarily deployed via on-premises or hosted models; although the vendor has reported it is actively working on a cloud strategy, this deployment model is not yet available.
- **Customer Support:** RSA Archer service/support ratings tend to be lower than most of its competitors, as reported by current and former customers.

Galvanize (ACL/Rsam)

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purposes of this research, ACL and Rsam are evaluated as a single company.

The legacy ACL IRM solution is focused on internal audit; governance, risk and compliance (GRC); and data analytics. ACL GRC (rebranded as "HighBond") and ACL Analytics (rebranded as "ACL Robotics"), evaluated for this research, can be deployed exclusively via a SaaS model. ACL has supported clients worldwide. The legacy ACL customer base was distributed in the general commercial, public, manufacturing, professional services, financial services, insurance and healthcare sectors. Technical support was provided in each region, with Latin America supported out of North America.

Rsam was headquartered in Secaucus, New Jersey. The legacy Rsam product targeted larger IRM projects (more than 1,000 users), and can be deployed via on-premises, hosted or SaaS models. Rsam's legacy IRM solution was focused on IT risk, incident response, vendor risk and business continuity management planning (BCMP). Rsam had an overlapping client base with legacy ACL in both geographic and industry sector distributions. Rsam had a global 24/7 support team, with support offices in New Jersey, U.S., and Bangalore, India.

Strengths

- **Geographic Strategy:** The combined entity has a wider range of geographic customer base and support, and can compete on larger and more-complex IRM projects.
- **Product/Service:** The legacy Rsam product had a design focus on application scalability, which resulted in capabilities that attract a wider range of IRM project sizes and better alignment with customer's business growth.
- **Product/Service:** Legacy ACL's rich out-of-box regulatory content, combined with configurable workflows, delivered a wide range of risk data integration and reporting capabilities.

Cautions

- **Product Roadmap:** Joining two sets of products introduces complexity and uncertainty, due to required integrations and development investments. Integrating legacy ACL and Rsam is likely to require multiple releases and take several years to complete.
- **Sales Strategy**: There may be some near-term confusion with selling HighBond by Galvanize, due to whether to support the ACL or Rsam platform, and how pricing structures could evolve.
- **Integration:** Legacy Rsam's customer references included in this research, as well as several outside, reported lower satisfaction levels in their experiences with Rsam. This has been especially true in leveraging application configuration flexibility and implementation support.

IBM

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capabilities. Version 8 is a new release since the previous Magic Quadrant. It includes a new interface designed for first-line-of-defense users. The platform can be deployed via on-premises, hosted or SaaS models. Target buyers for OpenPages include risk and security leaders at global organizations that have a short- or long-term goal of enterprisewide IRM.

OpenPages has a global client base. Approximately 50% of its customers are in the financial services sector, with the remainder spread across sectors such as energy, utilities, healthcare, telecommunications and government. IBM supports OpenPages via nine help center facilities, with locations in U.S. and Canada, as well as in six other countries worldwide.

Strengths

- **Product/Service:** OpenPages demonstrates effective risk assessment methodology and substantial risk calculation capabilities, policy documentation management and controls mapping.
- **Geographic Distribution:** IBM's geographic support rating ranks as one of the highest in customer references. Combined with IBM's in-country resources, OpenPages attracts global and complex IRM projects.
- **Integration:** As part of a rich set of APIs, IBM has been offering Watson capabilities for risk management predictive analytics; however, most IBM customers are not yet realizing value from this emerging feature set.

Cautions

- **Pricing:** As reported by customers, and, in comparison with smaller IRM platforms evaluated in this research, OpenPages' pricing could be less competitive, especially for midmarket clients.
- **Implementation:** Among the surveyed customer references, the average reported implementation time frame for OpenPages, primarily on the previous release, is among the longest.
- **Product Strategy:** Although OpenPages is widely adopted by the second and third lines of risk users in global organizations, a few customers reported it was less straightforward when serving their first line of risk users.

Ideagen

Headquartered in Nottingham, U.K., Ideagen is a publicly traded company quoted on the Alternative Investment Market (AIM) of the London Stock Exchange. Pentana Risk, evaluated for this research and renamed from Pentana Performance, is offered as a pure SaaS solution. In addition, Ideagen has other relevant products, such as Coruson, which can be deployed via on-premises or hosted models. About 50% of its customer base is installed on-premises. Ideagen's

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Support is offered out of Nottingham and Glasgow (U.K.), Dubai (UAE), Kuala Lumpur (Malaysia) and Raleigh (U.S.).

Strengths

- **Financial Viability:** Publicly reported financial data shows healthy and positive revenue growth. In addition, Ideagen has expanded through continued acquisitions.
- **Vertical Industry Strategy:** Ideagen has the heritage and strong expertise in supporting audit and risk management in financial services, safety in transportation, and quality management in manufacturing.
- **Integration:** Ideagen offers a set of dashboard-driven UIs covering a broader set of risks, including reputational, people and regulatory. Reporting Creator supports ease of use and self-serve flexibility for front-line risk users.

Cautions

- **Deployment Model:** Most of Ideagen's customer base is deployed via the on-premises option, whereas the new SaaS deployment model gains more tractions.
- **Marketing Strategy:** Ideagen has a broad strategy for ERM buyers, but does not provide specifics about the BCMP.
- **Integration:** Ideagen's IRM capabilities support basic analytics, and advanced risk-data analysis (such as statistical modeling) requires implementation services via Ideagen's APIs.

Lockpath

Headquartered in Overland Park, Kansas, Lockpath is privately held. It offers the Keylight platform as its IRM solution. Keylight Enterprise, evaluated for this research, can be deployed via SaaS, as well as in an on-premises model. Most of Lockpath's customers (more than 70%) are deployed via the SaaS model. Customers in healthcare, financial services and technology sectors make up more than 50% of Keylight's installed base. Most of Lockpath's customers are located in North America, with a few distributed across South America, Europe and Asia. Lockpath offers support out of its headquarters in Kansas. Implementation services are delivered by Lockpath's professional services team and a network of global partners.

Strengths

- **Marketing Strategy:** Lockpath has wide market presence in terms of company sizes and industry sectors.
- **Time to Value:** With Lockpath's QuickStart deployment option via Amazon Web Services (AWS), customer references have consistently reported favorably on their project lengths and time to value.

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- **Integration:** Lockpath offers configuration flexibility; especially in its workflow-centric application designs. Every IRM critical capability is part of a workflow step connecting risk management processes, including risk quantification and scenario analysis.

Cautions

- **Geographic Distribution:** Lockpath does not have local and in-country resources to directly support some of the complex, globally distributed implementation projects.
- **Sales Strategy:** Despite Lockpath's leverage on joint sale and upsell opportunities, its sales force and channel are largely North America, plus one channel in the U.K.
- **Integration:** Workflow in cases involving complex and large-scale IRM projects requires a moderate amount of administrative configuration effort.

LogicManager

LogicManager, privately held, is headquartered in Boston, Massachusetts. The company has its heritage in supporting enterprise risk management for midsize enterprises. LogicManager, its IRM solution set evaluated for this research, is offered exclusively as a SaaS platform. LogicManager supports clients in North America, Asia, the U.K. and Western Europe. Banking, credit unions and other financial services organizations make up about half of LogicManager's client base. Healthcare, insurance, manufacturing, education, energy, software publishers, and civic and social organizations each encompass between 5% and 20% of the client base. Technical support is provided from Boston, Massachusetts, and from its Europe satellite offices.

Strengths

- **Time to Value and Integration:** References frequently report rapid deployment as a characteristic of their LogicManager projects, and a high number report project length as three or fewer months. LogicManager also received the highest survey score for overall rating of integration and deployment.
- **Offering Strategy:** LogicManager has a stated product roadmap emphasizing simplicity and usability. It advocates designing functionalities to attract higher end-user engagement or self-service.
- **Product/Service:** Though LogicManager has large-enterprise customers, the company's service structure is optimized to support midsize enterprises.

Cautions

- **Industry Coverage:** Due to its customer concentration in financial services, some customers outside its main customer base reported lower ratings on LogicManager's expertise.

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- **Geographic Distribution:** LogicManager's primary support is based in Boston, Massachusetts, which is a less favorable consideration for globally distributed risk teams, due to its strong focus on North America.
- **Integration:** LogicManager offers limited features in advanced risk analytics, such as statistical data modeling and predictive scenario planning.

MetricStream

Headquartered in Palo Alto, California, MetricStream is privately held. It offers MetricStream GRC Platform. Version M7 was evaluated for this research. The company uses a continuous improvement/continuous deployment (CI/CD) model for releasing fixes and new features. MetricStream's governance, risk and compliance (GRC) suite includes Enterprise Risk, Operational Risk, Internal Audit, Compliance, SOX Compliance and Policy Document. The M7 platform can be deployed via SaaS, hosted or on-premises models.

Approximately 80% of MetricStream's revenue comes from SaaS deployment. Financial services, healthcare and manufacturing are top target verticals, with 45% of MetricStream's revenue coming from the financial services sector. MetricStream offers worldwide support, and its primary support centers are in the U.S., the U.K., and India, with secondary support in other European countries, the UAE and the Philippines.

Strengths

- **Innovation:** MetricStream has devoted a high percentage of its revenue and personnel to research and development. MetricStream continues to demonstrate leadership in innovation of a former on-premises offering to a SaaS offering and has overcome considerable obstacles to achieve that end.
- **Product/Service:** The product's ability to model complex workflows and UX customization ability provides effective customer use.
- **Integration:** MetricStream M7 offers an open architecture and flexible capabilities addressing a wide range of use cases and is adaptable to requirement changes.

Cautions

- **Customer Experience:** MetricStream M7 has had numerous deployments; however, end users report some deployment concerns, including contact and response time issues.
- **Offering (Product) Strategy:** Customers have reported some advanced features not available on mobile devices and higher turnaround times in product/development decisions pertaining to unique requirements.
- **Data Visualization and Workflow:** Although data visualization and risk assessment flexibility

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Refinitiv

Headquartered in London and New York City, Refinitiv was formerly the financial and risk business of Thomson Reuters, and was incorporated in October 2018. The company offers a spectrum of risk-and-compliance-related technologies and services. Connected Risk and Enterprise Risk Manager, which is evaluated for this research, can be deployed via on-premises, hosted and SaaS models. However, most of its customers are deployed on-premises or hosted. Refinitiv's customer base is widely distributed in all major geographical regions, with a concentration in the financial services sector (44% in 2018), and primary product support is delivered by service centers in the U.S., the U.K. and the Philippines.

Strengths

- **Pricing:** Connected Risk is one of the most cost-effective products for IRM capabilities offered.
- **Product/Service:** In addition to technology capabilities, Refinitiv is supported by substantial third-party risk and regulatory content, covering global and jurisdiction-specific markets. This is especially advantageous for organizations in the financial services sector.
- **Integration:** The Connected Risk platform provides preconfigured modules and a toolkit-style approach for developing customer portal screens and integrations with third-party data sources required for risk monitoring, analysis and reporting.

Cautions

- **Vertical Industry Strategy:** Connected Risk remains predominantly a banking and financial services IRM offering.
- **Customer Experience:** Based on average customer experiences with Connected Risk, customer references scored Refinitiv lower than the other vendors included in this research.
- **Integration:** Connected Risk has limited features and content for IT risk users, in comparison with the evaluated vendors in this research, although it offers broader macro levels of market and global risk monitoring.

Resolver

Headquartered in Toronto, Ontario, Resolver is privately held. Resolver Core, which is evaluated for this research, is a SaaS-only application deployed on AWS. Almost half of Resolver's customers are in the financial services and insurance sectors, with the remainder in education, software publishers and other industries. Resolver predominantly targets clients located in North America (70% of its customer base) and the U.K., with more international expansion planned. The company has 24/7 emergency support coverage and scheduled support from offices in London, U.K.; Toronto, Ontario; Charleston, West Virginia; Edmonton, Alberta;

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- **Product/Service:** Ease of use is a noticeable characteristic; especially in data visualization and risk/control mapping for incident management.
- **Sales Execution and Pricing:** Resolver Core's pricing model is simple — based on a fixed annual fee for integrated use cases, plus a platform fee for a "full user." It has access across use cases.
- **Integration:** Resolver Core incorporates continuous controls monitoring and incident analysis data into an overall risk picture. The data is visually digestible for different users via its enterprise risk dashboard.

Cautions

- **Product Adoption and Customer Distribution:** Resolver's customers often start with the vendor's incident management or ERM module, then extend to use its broader IRM capabilities. The customer geographic distribution is concentrated in North America, although some international expansion is taking place.
- **Vertical Industry:** Resolver does not yet have a balanced vertical-industry market distribution; half of its client base is concentrated in financial services and insurance industries.
- **Product/Service:** Resolver Core has relatively limited features in advanced risk quantification and analytics, such as predictive scenario planning.

Riskonnect

Headquartered in Atlanta, Georgia, with offices in Chicago, Dallas, Amarillo, London, Sydney and Mangalore, Riskonnect is privately held. The company's software development teams are based in India. Riskonnect acquired GRC provider Aruvio in late 2017 and Marsh Clearsight in late 2018. Riskonnect IRM solution and Riskonnect Insights, evaluated for this research, are delivered via a SaaS model exclusively. Riskonnect offers its product set in North America, EMEA and the Asia/Pacific (APAC) region. It supports a broad range of vertical industries — e.g., manufacturing, retail and consumer goods, healthcare, construction and engineering, energy and utility, mining and natural resources, telecom and IT, transportation and logistics, financial services, and insurance. Customer support is delivered from Atlanta, Chicago, London, Sydney and Mangalore, India.

Strengths

- **Time to Value:** Riskonnect is built on the Salesforce Lightning platform, and has been designed as a SaaS application. It supports more-rapid deployment cycles.
- **Vertical Industry:** Riskonnect has a relatively even distribution across at least four vertical industries (i.e., retail, manufacturing, transportation and insurance), with growth in others.

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Cautions

- **Product Strategy:** Although flexible, Riskonnect's use of force.com as a delivery platform may lead to additional evaluation activities by clients unfamiliar with the force.com platform.
- **Product Roadmap:** Riskonnect continues to expand product features across a wide coverage of IRM use cases. This may influence consideration, based on the depth of IRM use case functionality aligned with the client's need.
- **Integration/Implementation:** Customer references reported below-average satisfaction ratings in the ease of integrations using standard APIs and other tools, compared with other vendors included in this research.

SAI Global

Headquartered in Chicago, SAI Global is privately held. The company offers its SAI360 platform with a broad set of solutions for risk management and some focus on specific industries. As the main IRM solution evaluated for this research, SAI360 Compliance Risk is delivered primarily via privately hosted or SaaS models. The solution focuses on such sectors as financial services, healthcare, life sciences, retail, manufacturing, energy and utilities. SAI Global's client base is distributed across Europe, the U.K./Ireland, the Middle East/Africa, North America and the APAC region. Customer support is offered in the U.K., Germany, the Middle East, Asia, Australia and the U.S.

On April 2019, SAI Global acquired BWise, a business from Nasdaq. In August 2018, SAI Global bought Strategic BCP.

Strengths

- **Customer Experience:** Customer references reported higher levels of satisfaction with presales and postsales support, including pricing and contract negotiation, compared with the other vendors included in this research.
- **Geographical Strategy:** SAI Global has resources across the globe for international coverage in implementation services and support.
- **Integration:** SAI Global reporting capability integrates risk data across multiple risk processes, including incident management, privacy compliance (such as GDPR) and third-party sources for monitoring and data visualization.

Cautions

- **Product Roadmap:** SAI Global's product portfolio includes multiple acquired products, and the future of making these products into a cohesive and integrated set could be unpredictable.

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ServiceNow

Based in Santa Clara, California, ServiceNow is a public company. It has built ServiceNow GRC on the ServiceNow platform as a service (PaaS) offering. ServiceNow GRC, evaluated for this research, is almost exclusively deployed via a SaaS model, although on-premises is available on request by customers. ServiceNow GRC targets buyers around the globe. ServiceNow also has solution consultants and industry marketing teams dedicated to financial services, healthcare, education, life sciences and government sectors. Support centers are located in Santa Clara and San Diego, California; Amsterdam, the Netherlands; Staines, the U.K.; and Sydney, Australia.

Strengths

- **Product Strategy:** ServiceNow has rapidly invested and developed IRM capabilities in recent years. It continues to be committed to deliver workflow-rich UIs, supporting a wide range of risk users across an enterprise. The IRM product takes advantage of the Now Platform for capabilities in workflow design and integrations.
- **Customer Experience:** Technical support is 24/7, and ServiceNow has globally distributed support centers. It has hosted well-attended conferences and forums. Its Customer Success Center includes prescriptive guidance to customers based on existing implementations.
- **Geographic Strategy:** ServiceNow has a global footprint and matching partner model, particularly in consulting and SI partnerships.

Cautions

- **Sales Execution/Pricing:** Pricing due to bundling and subscription complexity can be challenging for clients.
- **Implementation:** Customers have noted that some implementations, such as workflow configurations, can be more time-consuming than expected, although best practices and implementation partners can help accelerate these projects.
- **Product/Services:** ServiceNow partners with Fairchild Resilience System for business continuity management (BCM) programs; hence, for the purposes of IRM critical capabilities, it doesn't have native BCM support.

SureCloud

Headquartered in London, the U.K., SureCloud is privately held. It offers a series of prebuilt IRM solutions and the ability to build custom solutions hosted on the SureCloud platform. The product has modules ranging from third-party risk assessment to vulnerability management. SureCloud GRC, which is evaluated for this research, is a cloud application designed exclusively for the SaaS deployment model. Infrastructure hosting providers are Rackspace and AWS. Its customer base is primarily in the retail, financial services and insurance sectors, and it's

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SureCloud primarily targets North American and mainland European markets; however, it also has presence in Australia and the Middle East via channel partners. Direct sales and support are provided from Reading, U.K. and Dallas, Texas, U.S. Resellers cover Australia and the Middle East.

Strengths

- **Product/Service:** SureCloud offers a set of strong IT and third-party risk management capabilities; particularly in risk assessment and ad hoc audit.
- **Time to Value:** SureCloud is among the shortest rated for deployment length by the customer references included in this research. UI and workflow are streamlined, and users (first line of defense) can largely self-serve. Additional features are available via preconfigured templates.
- **Integration:** In addition to risk content covering major frameworks (such as the Committee of Sponsoring Organizations [COSO] and the National Institute of Standards and Technology [NIST]) and standards (such as GDPR), SureCloud integrates external cybersecurity and vulnerability data sources as well.

Cautions

- **Overall Viability:** SureCloud is a relatively new entrant to the IRM market, and has a small customer base among the evaluated vendors in this research.
- **Geographic Strategy:** Its sales force is limited, primarily operating in two locations in the U.K.
- **Product/Service:** SureCloud offers limited capabilities for advanced risk quantification and analytics, although a list of related items is planned on its product roadmap.

Vendors Added and Dropped

We review and adjust our inclusion criteria for Magic Quadrants as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant may change over time. A vendor's appearance in a Magic Quadrant one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. It may reflect a change in the market and, therefore, changed evaluation criteria, or of a change of focus by that vendor.

Added

CAMMS and SureCloud

Dropped

Due to the evolution of the inclusion criteria for this research and, sometimes, vendor product focus shifts, vendors included in previous research could be dropped.

Mitratech has been dropped.

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The inclusion criteria represent the specific attributes that analysts believe are necessary for inclusion in this research. To qualify for inclusion, vendors must demonstrate the following:

- They must have the ability to significantly address (on an enterprisewide basis) at least 75% of the key functions/features across the five critical capabilities listed in the research.
- The vendors must have 250 or more customers using their IRM solutions.
- Vendor must derive revenue from the sale of IRM solutions and related services (e.g., implementation/training and software product customization) in three or more of the following global regions — North America, Latin America, EMEA, Japan and the APAC region.
- Vendors must also demonstrate full support of three use cases, as defined above, in their generally available (GA) products.

Evaluation Criteria

Ability to Execute

Gartner analysts evaluate vendors on

the quality and efficacy of the processes, systems, methods and procedures that enable IT provider performance to be competitive, efficient and effective, and improve revenue, retention and reputation in Gartner's view of the market.

Product/Service: This criterion involves the core goods and services offered by the vendor that compete in/serve the defined market. This also includes product or service capabilities, quality, feature sets, skills and so on, whether offered natively or through OEM agreements/partnerships, as described in the market definition. Evaluation ratings are derived from formal product demonstrations and customer feedback.

Overall Viability (Business Unit, Financial, Strategy, and Organization): This criterion is an assessment of the overall organization's financial health and the financial and practical success of the business unit. It is also an assessment of the likelihood that the individual business unit will continue to invest in and offer the product, and advance the state of the art in the organization's portfolio of products. Revenue growth and the product implementation growth trend during the past three years are primary determinants of the viability rating. Customer perception of future viability is also considered.

Sales Execution/Pricing: This criterion involves the vendor's capabilities in all presales, sales and postsales activities, and the structure that supports them. This also includes deal management, pricing and negotiation, presales support, and the overall effectiveness of the sales channel. Customer ratings of the quality of sales-related activities, as well as an evaluation of the clarity and competitiveness of the vendor's pricing structure are primary determinants in rating this criterion.

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Market Responsiveness and Track Record: This criterion involves the vendor's ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor's history of responsiveness. Customer ratings are a primary factor.

Marketing Execution: This criterion involves the clarity, quality, creativity and efficacy of programs that are designed to deliver the organization's message. This is aimed at influencing the market, promoting the brand and business, increasing product awareness, and establishing positive identification with the product/brand and organization in the minds of buyers. This "mind share" can be driven by a combination of publicity, as well as promotional, thought leadership, word of mouth and sales activities. Customer ratings of the vendor's effectiveness in responding to requests for information (RFIs) and requests of proposals (RFPs) are considered.

Customer Experience: This criterion involves the relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This also can include ancillary tools, customer support programs (and the quality thereof), availability of user groups, and service-level agreements (SLAs). Customer ratings are the primary determinant when evaluating this criterion.

Operations: This criterion involves the organization's ability to meet its goals and commitments. Factors include the quality of the organizational structure, including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

Table 1: Ability to Execute Evaluation Criteria

Evaluation Criteria ↓	Weighting ↓
Product or Service	High
Overall Viability	High
Sales Execution/Pricing	High
Market Responsiveness/Record	Medium
Marketing Execution	Medium
Customer Experience	High

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Source: Gartner (July 2019)

Completeness of Vision

Gartner analysts evaluate vendors on their ability to convincingly articulate logical statements. This includes current and future market direction, innovation, customer needs, competitive forces, and how well they map to Gartner's view of the market.

Market Understanding: This criterion involves the vendor's ability to understand buyers' needs and translate those needs into products and services. Vendors that show the highest degree of vision listen to and understand buyers' wants and needs, and can shape or enhance those wants with their added vision. One key factor is customer ratings of the vendor's ability to fulfill its critical functional capabilities, using its IRM or business process experience.

Marketing Strategy: This criterion involves a clear, differentiated set of messages that is consistently communicated throughout the organization and externalized through the website, advertising, customer programs and positioning statements. The vendor's ability to target specific market segments by addressing unique industry or geographic requirements is a primary determinant of this criterion rating.

Sales Strategy: This criterion involves the strategy for selling products using the appropriate network of direct/indirect sales, marketing, service and communication affiliates to extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base. Customer ratings of the vendor's pricing strategy also are considered.

Offering (Product) Strategy: This criterion involves a vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature set as they map to current and future requirements. Evaluation factors include customer ratings of the vendor's product performance and scalability, as well as the product's roadmap for future enhancement.

Business Model: This criterion involves the soundness and logic of a vendor's underlying business proposition. Evaluation of this criterion includes the sustainability of the model, given current and projected economic and environmental conditions.

Vertical/Industry Strategy: This criterion involves the vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including vertical industries. Customer ratings of the vendor's industry-related experience are also considered.

Innovation: This criterion involves direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or preemptive purposes. Included in this criterion is an evaluation of product roadmaps, as well as past and planned levels of R&D investment.

Geographic Strategy: This criterion involves the vendor's strategy to direct resources, skills and

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those geographies and markets. A vendor's ability to generate a significant level of revenue outside its native geography is considered a key factor in rating this criterion.

Table 2: Completeness of Vision Evaluation Criteria

Evaluation Criteria ↓	Weighting ↓
Market Understanding	Medium
Marketing Strategy	Low
Sales Strategy	Low
Offering (Product) Strategy	High
Business Model	Low
Vertical/Industry Strategy	Medium
Innovation	High
Geographic Strategy	Low

Source: Gartner (July 2019)

Quadrant Descriptions

Leaders

The Leaders in the IRM market display significant progress in adopting integrated risk architecture and market strategy and have deployed products and services, along with support, in significant numbers. Leaders have sometimes-complex IRM deployments across most risk domains from compliance, audit of business continuity and IT risk, industry verticals, and major global geographic regions.

Leaders: Dell Technologies (RSA), IBM, Lockpath, MetricStream, ServiceNow

Challengers

Challengers in the IRM market have good execution and address many critical capabilities, as defined in this research. Challengers are still developing strategy and architecture that fully addresses various risk domains and industry verticals. They are capable of being future Leaders, as long as they complete a consistent vision and innovate by having a common

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Visionaries

Visionaries set the pace for innovation and approach to some IRM critical capabilities. They have a high awareness of and can articulate important market trends and directions in method of delivery and approaches to integrated risk business concerns. However, Visionaries may not be in a position to fully deliver and consistently execute on that vision. Broad geographic coverage and large complex deployments may not be as frequent as those found in the Leaders quadrant at this time.

Visionaries: Riskonnect, SAI Global

Niche Players

Niche Players have evolved a strategic approach to IRM that is in early stages of delivery. They may focus on one specific segment of the market, such as smaller organizations with more-modest requirements, or on one or two critical capabilities, while providing some features for other capabilities. Innovation and execution exist, but may not be as consistent as with companies in other quadrants. Niche Players know what is needed for IRM success, but may be limited in execution abilities, due to geography, size or sales focus.

Niche Players: CAMMS, CURA Software, Resolver, SureCloud

Context

Security and risk management (SRM) leaders must ensure that they are adopting an IRM strategy that assesses the relevant risk domains in their individual organizations. Regulators and other stakeholders pay more attention to risk management practices as part of their financial supervision. The low-risk-practice maturity level not only could result in lower credit ratings by financial services providers, but could threaten the overall achievement of business goals.

The success of an IRM strategy and technology investment also requires consistent risk management policies, which often necessitate staff retraining, as well as the implementation of new compliance policies and procedures. The change management associated with establishing a risk-aware culture and aligning risk monitoring with digital business growth is often the most difficult aspect of adopting IRM.

In addition, it is crucial to harmonize and consolidate data sources across the company on a continual basis, rather than at a single point in time. This may create some challenges from a process perspective, as well as from an IT redesign perspective. The integration of various data sources is, on the other hand, critical for the eventual success of a top-down risk management dashboard that is accurately displaying bottom-up data.

Although some companies may aspire to have a single IRM platform to cover all risks, it may be more practical to have a main IRM solution combined with other point solutions to fully support

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Market Overview

Cyberattacks, customer trust, new data protection and privacy compliance requirements, and the rapid adoption of new technology are introducing unanticipated risks. In a 2019 risk survey by the American Institute of CPAs and North Carolina State University, 68% of the surveyed organizations indicated they had recently experienced an operational surprise, due to risks they had not adequately anticipated.

Risk-data integration is core to an IRM strategy. According to Deloitte's Global Risk Management Survey, 11th Edition, 79% of the survey target cited that enhancing the quality, availability, timeliness of risk data as being the extremely high priority or very high priority.

In Gartner's interactions with clients, technologies with capabilities supporting risk-data integrations and analytics, and workflow flexibility are generally within the core evaluation of IRM projects.

Forward-looking organizations increasingly look for ways to improve the relationship between risk management investment and business outcomes. Striking a balance between taking risks and imposing controls requires risk management principles and insights into strategic decision making. It also means risk teams must develop digital capabilities to harness risk intelligence across the enterprise. Such a vision — supported by the right IRM program, processes and technology — is adaptive and well-suited to address new risks from cyber incident disruption, new regulatory obligation and the imperative to build customer trust.

From 2018 to 2019, the IRM market has been dynamic and evolving in terms of new entrants, as well as consolidations. A large number of vendors (more than 100 in Gartner's tracking) supply a wide range of risk management capabilities. Most are risk-domain-focused, which is reflected in Gartner's other research, including vendor risk, IT risk, business continuity management program (BCMP), and corporate compliance and oversight. The most notable consolidation deals have been the acquisition of Rsam by ACL and the acquisition of Nasdaq's BWise by SAI Global.

Evidence

Several hundred Gartner end-user client interactions

2019 Gartner security and risk survey data

Global risk management survey, 11th edition by Deloitte

2019 The State of Risk Oversight by AICPA and NC State Poole College of Management

Thomson Reuters and Blackstone close Financial & Risk transaction

ACL acquires Rsam

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Ideagen PLc Acquires Top Irish SaaS Provider

Ideagen Acquires U.S. Company, InspectionXpert

Evaluation Criteria Definitions

Ability to Execute

Product/Service: Core goods and services offered by the vendor for the defined market. This includes current product/service capabilities, quality, feature sets, skills and so on, whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

Overall Viability: Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood that the individual business unit will continue investing in the product, will continue offering the product and will advance the state of the art within the organization's portfolio of products.

Sales Execution/Pricing: The vendor's capabilities in all presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales support, and the overall effectiveness of the sales channel.

Market Responsiveness/Record: Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor's history of responsiveness.

Marketing Execution: The clarity, quality, creativity and efficacy of programs designed to deliver the organization's message to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This "mind share" can be driven by a combination of publicity, promotional initiatives, thought leadership, word of mouth and sales activities.

Customer Experience: Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements and so on.

Operations: The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure, including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

Completeness of Vision

Market Understanding: Ability of the vendor to understand buyers' wants and needs and to

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listen to and understand buyers' wants and needs, and can shape or enhance those with their added vision.

Marketing Strategy: A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the website, advertising, customer programs and positioning statements.

Sales Strategy: The strategy for selling products that uses the appropriate network of direct and indirect sales, marketing, service, and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

Offering (Product) Strategy: The vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature sets as they map to current and future requirements.

Business Model: The soundness and logic of the vendor's underlying business proposition.

Vertical/Industry Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including vertical markets.

Innovation: Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

Geographic Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, either directly or through partners, channels and subsidiaries as appropriate for that geography and market.

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