

ISAAC SACOLICK

DRIVING DIGITAL

THE LEADER'S GUIDE TO
BUSINESS TRANSFORMATION
THROUGH TECHNOLOGY

BONUS MATERIAL

AMACOM

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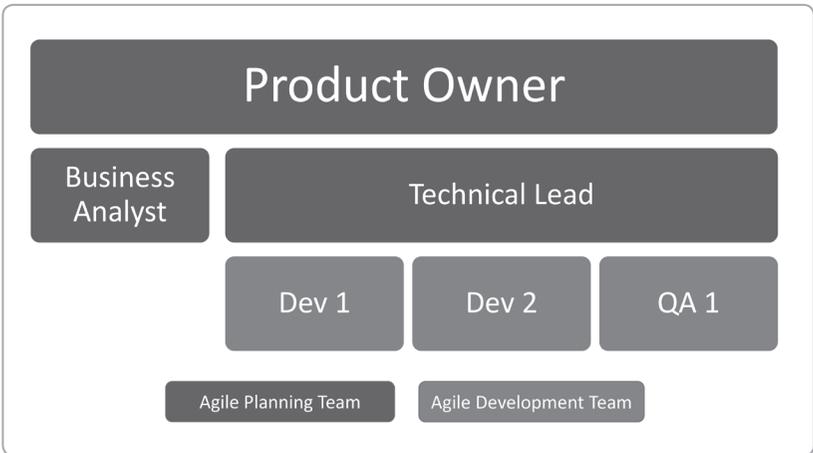


Figure 2-1. Roles on a small agile team

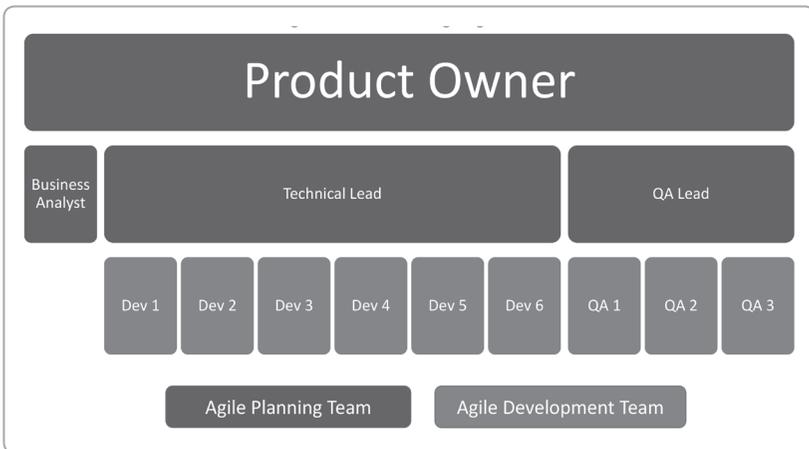


Figure 2-2. Roles on a larger agile team

Team Type	BA	Tech Lead	Team Members	Best for	Challenges
In-house	FTE	FTE	Most FTE	Legacy projects or when all skills are available in house	Learning new tech, agile, or other skills
Hybrid	FTE	SP	FTE/SP	Projects with new technologies	Teaching FTEs new technologies and developing standards
Hybrid	SP	FTE	FTE/SP	Accelerate development on existing technologies	Agile process governance if BA doesn't learn the organizational practice. Learning curve on existing application
Out-source	SP	SP	SP	One-time development efforts Integration projects Prototypes Internal applications	Developing an SLA Knowledge transfer, governance Additional challenges: some team members are FTE
Mobile	FTE/FL	FTE	FL	If specialized skills required Startups	Contracts with freelancers Additional communication challenges

FTE = employee, SP = service provider, FL = freelancer.

Figure 2-3. Filling people and skills on agile teams between employees and service providers

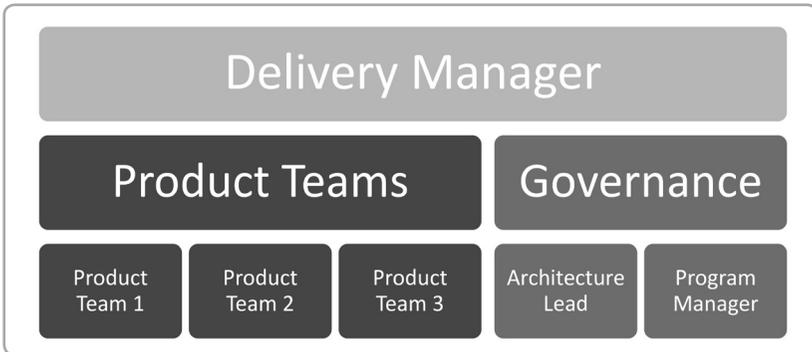


Figure 2-4. Multiteam agile organization

Role	Responsibilities	Ideally Owned By
Tool configuration	Filtering, special fields, report configuration	Business analyst
Sprint configuration	Starting/stopping sprints, scheduling stories into sprints	Business analyst
Epics	Naming, definition, prioritization, epic burndown	Product owner
Story definition and lifecycle	Naming, summary, acceptance criteria, tagging to epics, labeling with required data fields, transitioning stories across stages	Business analyst
Story estimation	Estimation, sizing, technical requirements, resource assignment	Technical lead
Release management	Defining releases, monitoring the release burndown, velocity management	Technical lead
Scheduling	Assigning stories to a release and to sprints, scheduling brainstorming and estimation sessions	Business analyst
Technical debt	Creating stories representing technical debt and tagging them, ensuring technical debt is prioritized	Technical lead
Defect review	Review escalated defects, assign initial priority, lead review with team	Business analyst
Communication	Release schedules, team status, demo introduction	Product owner

Figure 2-5. Roles and responsibilities configuring an agile tool for an initiative

Role	Responsibilities	Ideally Owned by
Release coordination	Scheduling, conflict resolution, change management standards, signoff on process or architecture changes	Delivery manager
Reporting and tracking	Field definition, reporting standards, velocity, productivity, and quality of team and member contributions	Program manager
Process Governance	Release, sprint, epic, story definitions meet standards. Resource allocations	Program manager
Architecture	Review technical standards, implementation responsibilities, technology selection	Architect

Figure 2-6 Roles and responsibilities in managing releases

Figure 2-7 shows the process I advocate.



Figure 2-7 Agile estimation on story stubs followed by sizing on fully written stories

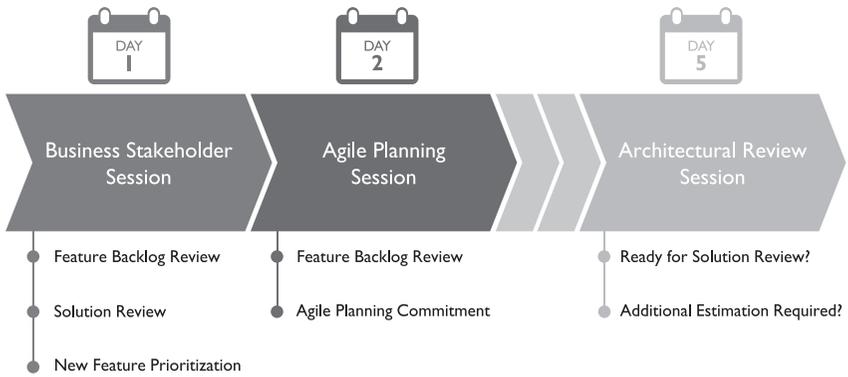


Figure 2-8 One-week agile planning sprint used to stub, estimate, write, and size stories

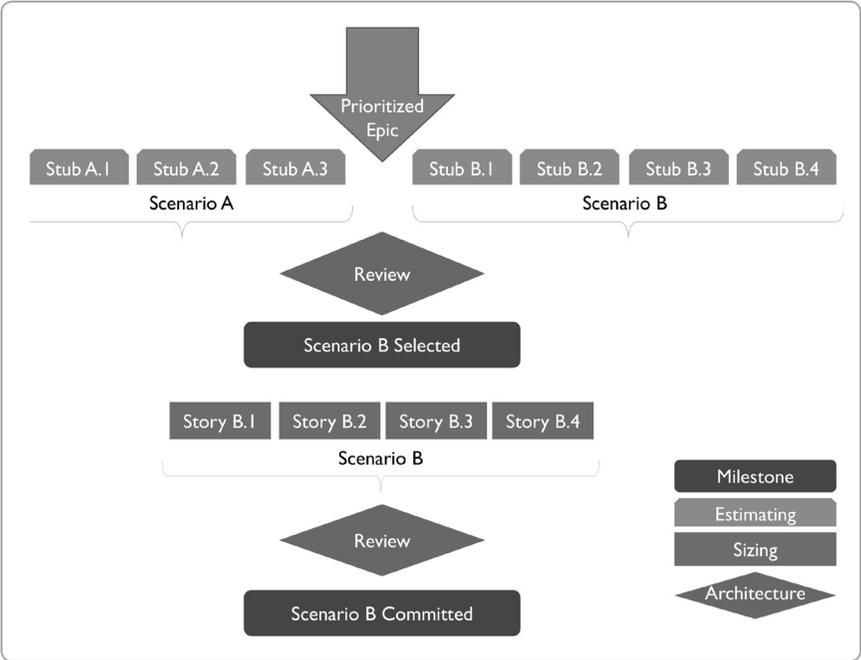


Figure 2-9. Instituting scenarios and architecture reviews in the agile planning process

Type of QA Test	Example Goals	Implementation	Responsibilities
Functional testing	Validate API against known inputs and outputs	Requires APIs for key transactions Can be used to validate data quality	Developers wrap API with unit testing harness QA automates test against known input and outputs
User experience	Validate user experience with target devices and expected workflows	Test with priority devices and browsers Simulate common user flows	Product owners, designers, and developers define UX and UI standards QA defines key user experiences to develop tests
Automation	Reduce time to execute regression tests by automating existing functional and user experience tests.	Integrate testing into software build and deployment scripts Validate the full application whenever developers check in new code	Developers select continuous integration and deployment (CI/CD) tools and integrate with testing scripts QA ensures new tests are automated and are integrated into software builds
Security	Ensure application complies to security standards on PII, data security and application vulnerabilities	Leverage and automate security tests Audit with security experts	Developers implements to defined security standards QA run security tests and report findings
Performance and load testing	Test response time and performance under load at API and UI levels	Validate response time for key transactions Ramp up load to determine where response time increases	Developers build performance measures into API and follow coding best practices regarding performance QA executes load tests, pinpoints slow transactions and researches root causes

Figure 2-10. QA test types, risk remediation, responsibilities between development and QA

Testing Discipline	Example QA Testing Questions	Example UAT Questions
Functional testing	Test boundary conditions Automate with different responses Validate error handling	Do I see expected results for simple and more complex use cases?
User experience	Compliant on UX/UI standards Automation of user flows to validate outputs Performance	Is the application simple enough to use for the most critical user flows? Is the application intuitive, and are directions and messages clear?
Data integrity	Manual and automated testing against predefined inputs and outputs	Are there sanity checks against specific searches, filters, and other data considerations?
Performance	Automated testing of specific flows to ensure performance against a defined volume of users	Can I get my work done efficiently?
Security	Validate against known vulnerabilities Test conditions for defined security groups	Do the right people have access to the right capabilities and data?

Figure 2-11. Difference between QA and UAT by testing disciplines

Stages Release Lifecycle

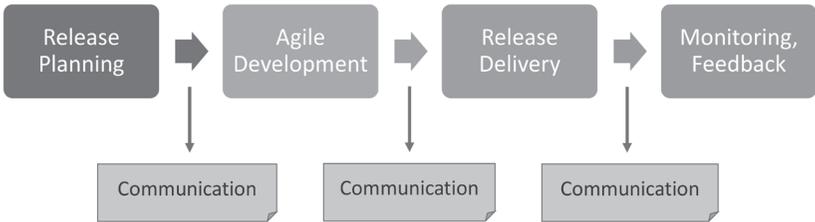


Figure 2-12. Release process illustrating major steps and communication stages

Role	Release Planning	Agile Development	Release Delivery	Monitoring, Feedback
Product owner	Proposes theme and target scope	Realigns priorities and engages UAT team	Customer communication, stakeholder signoff	Leads customer feedback review
Tech lead	Finalizes estimates Proposes number of sprints for the release	Runs agile team, tracks defects, tech debt, velocity Monitors burndown and escalates risks	Reviews final QA Documentation for operations team	Reviews application performance metrics
Business analyst	Schedules prioritized stories and estimation activities into sprints	Writes stories and reviews product Gets defects prioritized	Completes end-of-release documentation	Focuses on next release
Delivery manager	Performs Architecture reviews Reviews and endorses target scope and timeline Ensures tech debt is prioritized	Monitors programs for risk Engages Operations teams Ensures compliance on development and test standards	Ensures operations transition Reviews documentation and technical debt	Reviews performance metrics with operations, development, and product owner

Figure 2-13. Primary responsibilities in release planning

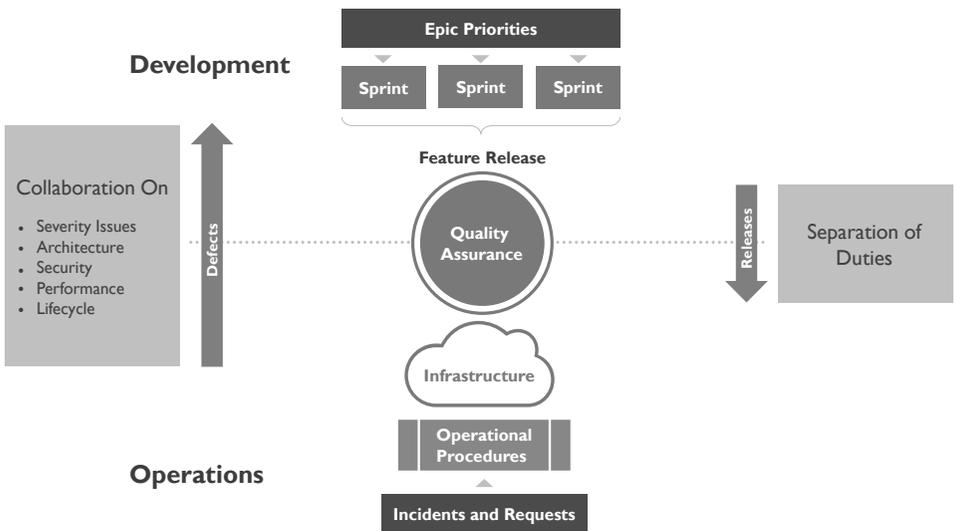


Figure 3-1. Defining DevOps practices maximizing agility and operational responsiveness

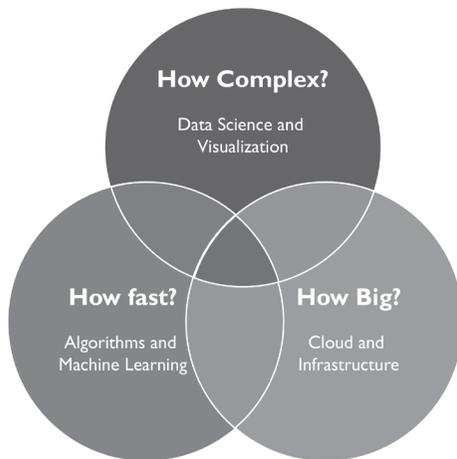


Figure 3-2. Optimizing Big Data platforms based on data requirements and priorities

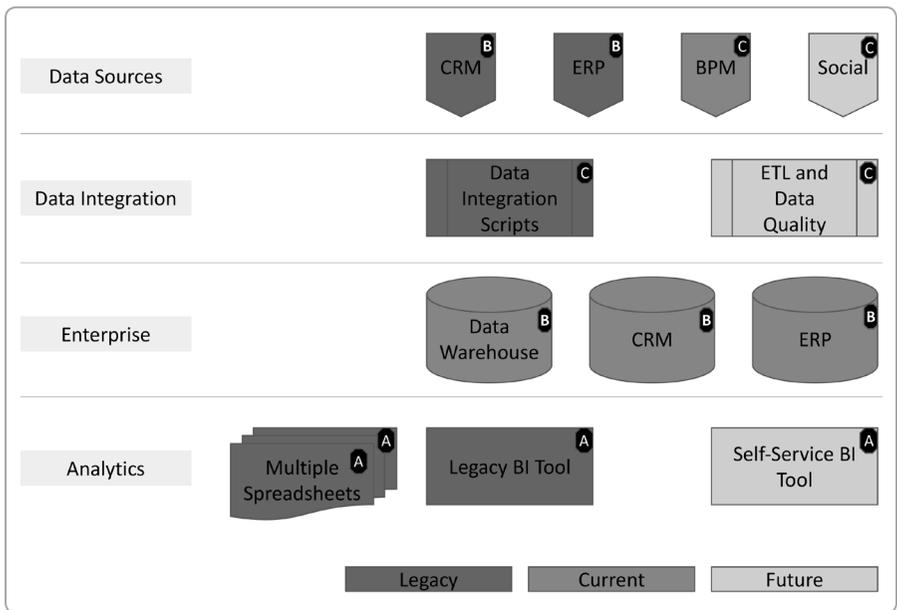


Figure 3-3. Reference architecture on modernizing data integration and analytics technologies

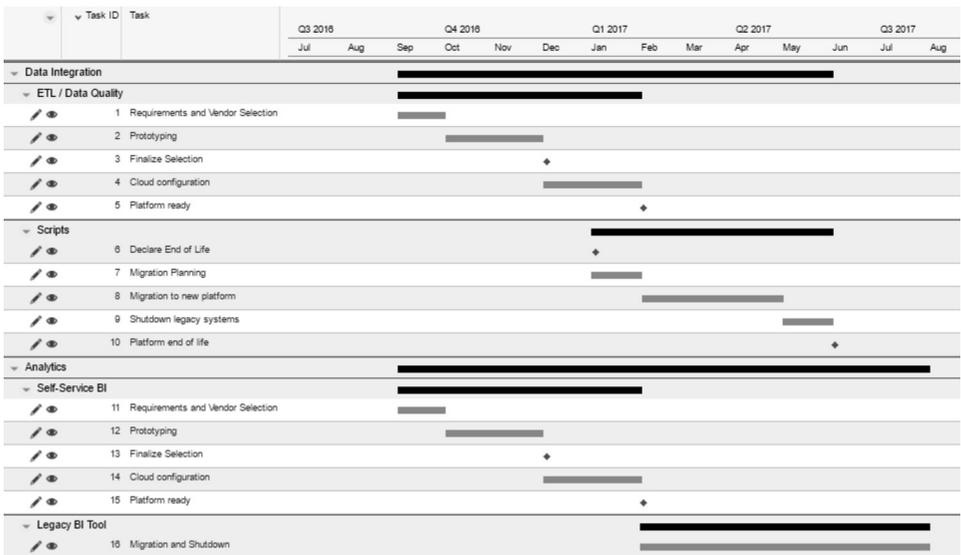


Figure 3-4. Example technology roadmap detailed with major transitions and milestones

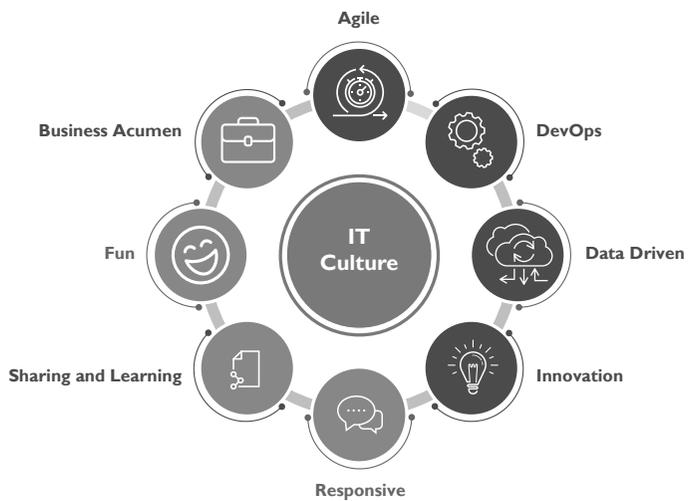


Figure 3-6. IT culture and the “digital” mindset that drives collaboration and results



Figure 4-1. Types of initiatives that drive ROI, enable new capabilities, and address risk

Initiative Stage	Definition
Defined	A placeholder with no formal work done on it
Ideation	An idea that has a founder developing its business case
Planning	A business case has been established, and a small team is developing a businesses and execution plan.
Development	Active resources working on the initiative
Operations	Initiative is operational. The working team is taking steps to ensure success criteria are met and working on continuous improvement priorities.
Done	Success metrics have been documented, and the initiative was closed.

Figure 4-2. Initiative stages from definition to done

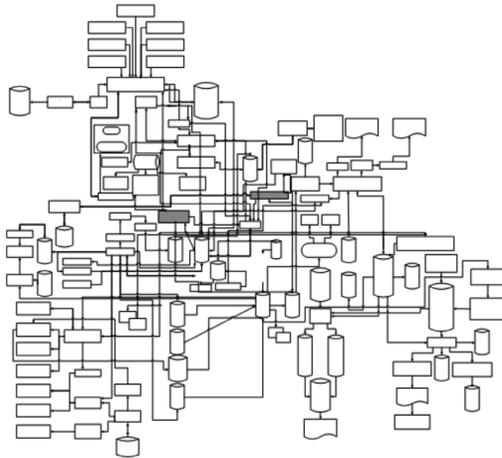


Figure 5-1. Illustration of a messy data architecture and unwieldy data flow

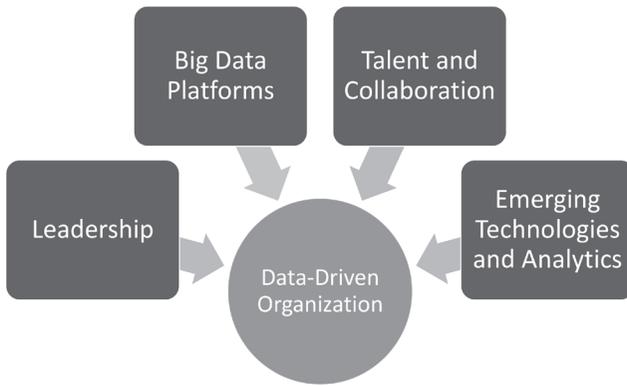


Figure 5-2. Factors that enable the data-driven organization

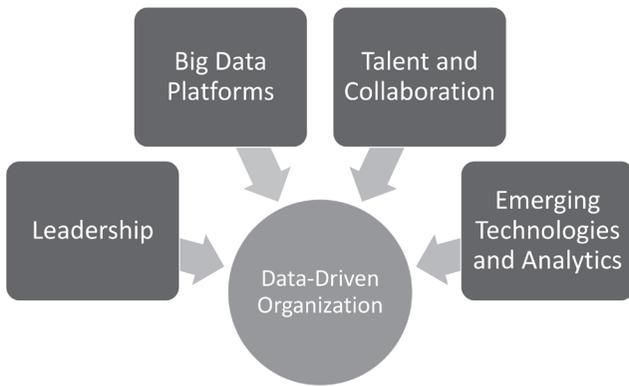


Figure 5-3. Collaboration among business leaders, data scientists, and technologists enabling the data-driven organization

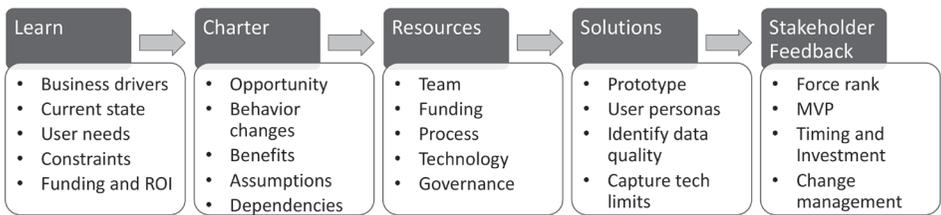


Figure 5-4. Data discovery process to ask questions and drive insights

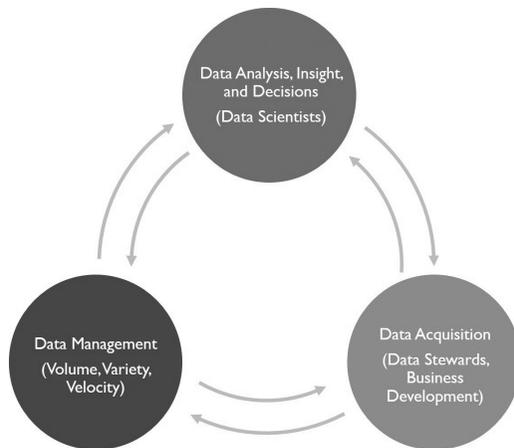


Figure 5-5. Relationship between data science, stewardship, and management

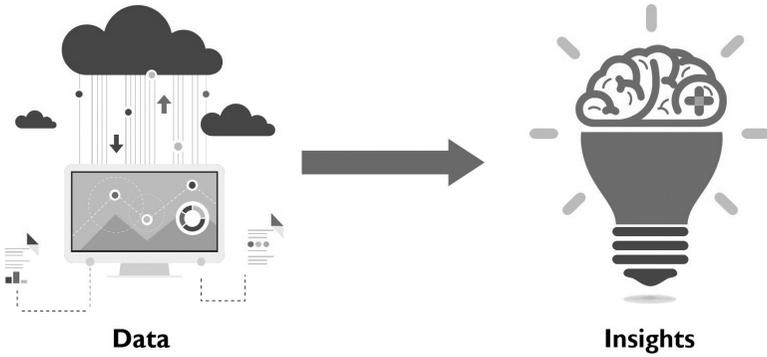


Figure 5-6. Getting from data to insights

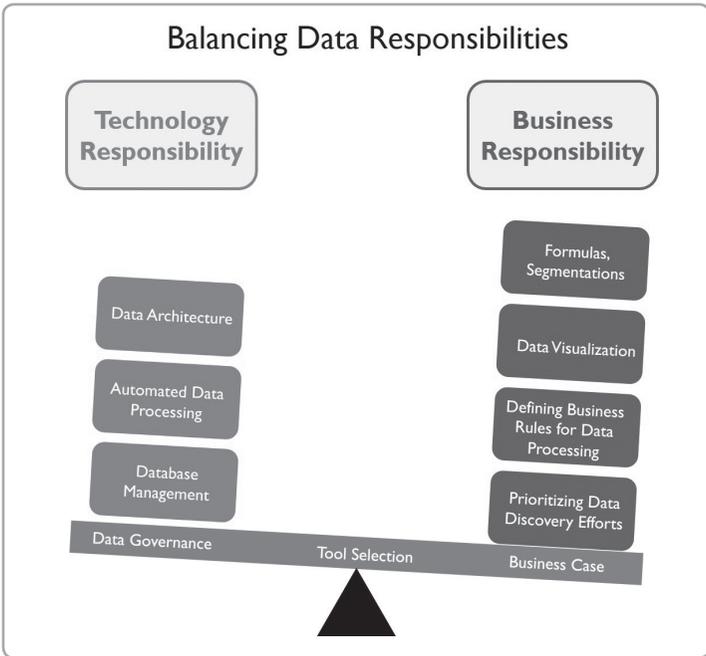


Figure 5-7. Balancing data management and data science responsibilities to enable collaboration and drive results

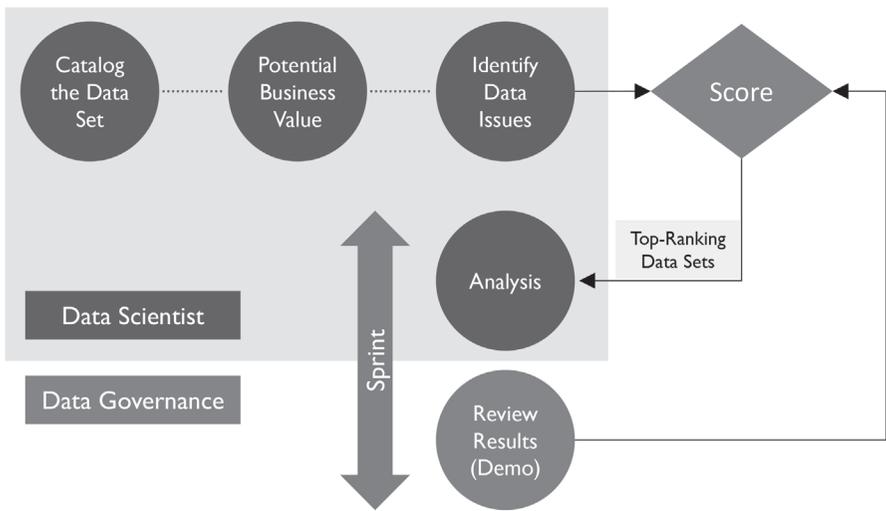


Figure 5-8. Agile data discovery process that enables data teams to prioritize analytics and demo results

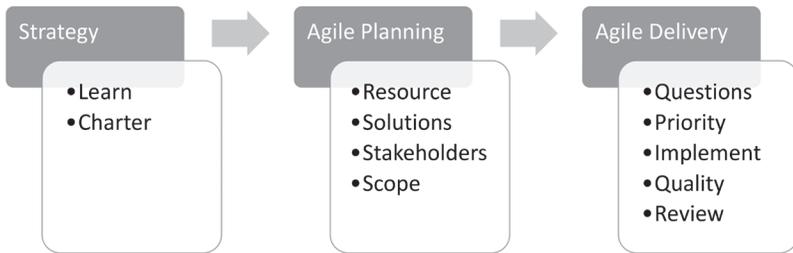


Figure 5-9. Data discovery practice: strategy, planning, and delivery

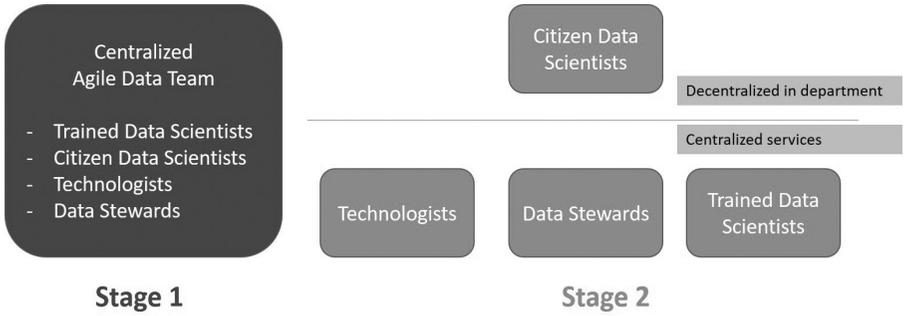
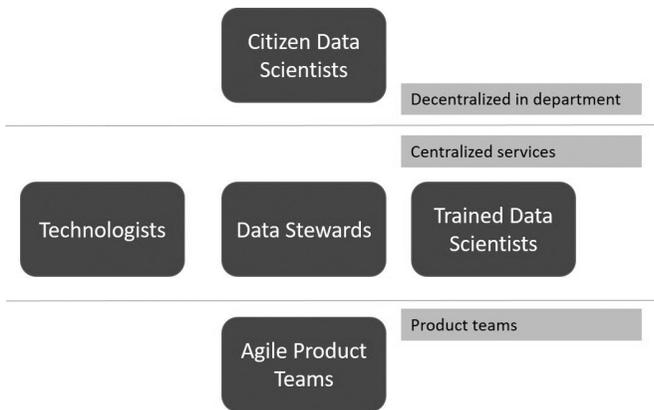


Figure 5-10. Stage 1 and 2 data organizations



Stage 3

Figure 5-11. Stage 3 data organization, illustrating shared services and decentralized data science teams



Figure 6-1. Parallel product management activities that facilitate developing a digital strategy

DEFINE TARGET MARKETS

- What data can be gathered on existing customers, the products they buy, and their spending with the business over the last three years?
- Align internal and external data to any existing customer segmentations. Are they still relevant, or are there new orientations based on the impact of digital transformation in the industry? Who is likely to benefit from digital and who is likely to contract?
- Based on the data available, look to agree on “strategic” customer segments and key customers and top prospects.
- Can a set of buying personas be defined that represent the buying decision makers? Can a separate set of user personas be defined? What other stakeholder personas are needed that are parties to either buying or using the product?
- Looking at the list of target markets, define a list of product offerings that may be competitive, substitutes, or complementary.
- What industry trends, regulation, or other factors will factor into whether this market will grow or shrink over the next decade? What research should leadership review?

AUDIT EXISTING PRODUCTS

- Develop a multiyear P/L that has the underlying revenue details by customer and a high-level breakdown of the operational costs, especially variable ones. What are the attributes of larger, longer running, or growing customers versus smaller, shrinking accounts?
- Capture the rate card expressing sales channel, price points, discounting, and incentives. Is product discounting trending better or worse?
- Define buying, user, and stakeholder personas. Map existing contacts to personas and rate health of the relationship.
- What does the competitive landscape look like today and how does it compare to the existing product offering?
- Interview key users and buys. Determine their successes using the product, pain points, and opportunities. Identify whether they are using any competitive or complimentary products. Validate value proposition.
- Capture journey maps showing how prospects and customers navigate. Identify pain points and opportunities.

TEST NEW PRODUCTS & PARTNERSHIPS

- Who are you targeting with the product or service? What customer segment or segments? What are some example customers from the existing client base and some new potential customers?
- What is the core value proposition and convenience you are addressing for these customers?
- What is the product vision expressing how the solution will address the core value proposition?
- What is known about competitive offerings, price points, and size of the potential market? Forecast the first year’s revenue potential and identify the underlying assumptions.
- What are some of the inputs needed to enable the product offering such as components, capabilities, data, and processes? Of these, which ones are assets of the company, others than can easily be acquired or developed, and others that require up front R&D?

Figure 6-2. Example questions to discover target markets, audit existing products, and assess the impact of new product concepts

Managing the Product Pipeline

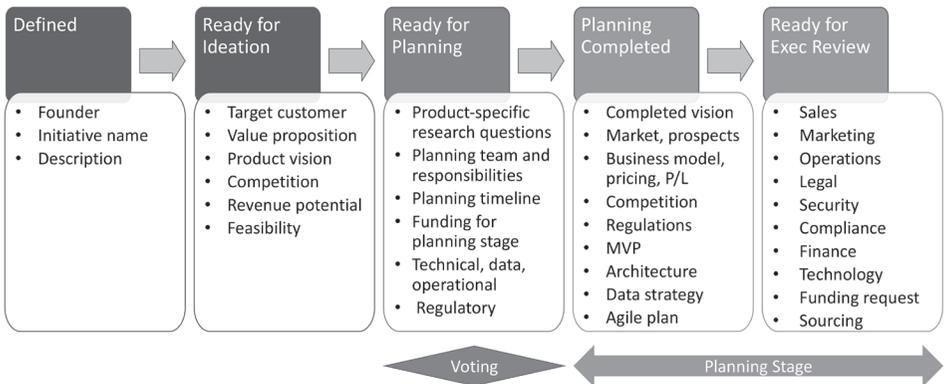


Figure 6-3. Product development lifecycle through planning stages

Driving Digital Practice Area	Smarter	Faster
Agile practices	<ul style="list-style-type: none"> • Self-organizing multidisciplinary teams are motivated to deliver quality solutions. • Transparency enables teams to make balanced decisions, prioritizing new capabilities and operational improvements. 	<ul style="list-style-type: none"> • Frequent review of priorities based on customer feedback brings optimal competitive capabilities to market faster. • Teams can get started working with minimal upfront planning.
Technology practices	<ul style="list-style-type: none"> • Enable developers to focus on driving innovation while operational needs can be addressed in parallel. • Enable ubiquitous access to data to deliver new products and drive smarter decision making. 	<ul style="list-style-type: none"> • Invested expertise in fewer platforms enables reapplying technical expertise to bring new capabilities and innovations to market faster. • Collaborative technology teams enable employees to focus on delivering high-quality results.
Portfolio practices	<ul style="list-style-type: none"> • Enable capturing and reviewing a large number of ideas and making balanced decisions on where to invest. • Transparent financial tracking enables realignment of resources and spending on the initiatives that show the most promise. 	<ul style="list-style-type: none"> • Define minimal and focused criteria on what project founder's planning steps and deliverables are so that execution can start sooner. • Lightweight and frequent communication methods enable leaders to address bottlenecks, provide assistance, or pivot initiatives.
Data-driven organization	<ul style="list-style-type: none"> • Empowers managers and individuals to make data-driven decisions and be responsive to customer and operational needs. • Leveraging new Big Data technologies and self-service data practices enables the organization to be smarter compared to competitors. 	<ul style="list-style-type: none"> • Looking at both internal and external data enables organizations to respond to customer needs and market conditions faster. • Data-driven organizations become more competitive by leveraging predictive analytics and artificial intelligence to deliver more convenience and insights to customers faster than competitive offerings.
Product management	<ul style="list-style-type: none"> • Defined practices to capture market opportunities and needs of existing customers ensure that product investments are optimized. • Evolving go-to market plans enables marketing and selling digital products when customers have many options. 	<ul style="list-style-type: none"> • Pursuing MVPs enables bringing products to market faster, with less investment while capturing customer-driven enhancements. • Aligning teams on big picture vision, short-term priorities, and defined acceptance criteria enables teams to execute efficiently.

Figure 7-1. How driving digital practices enable a smarter-faster organization

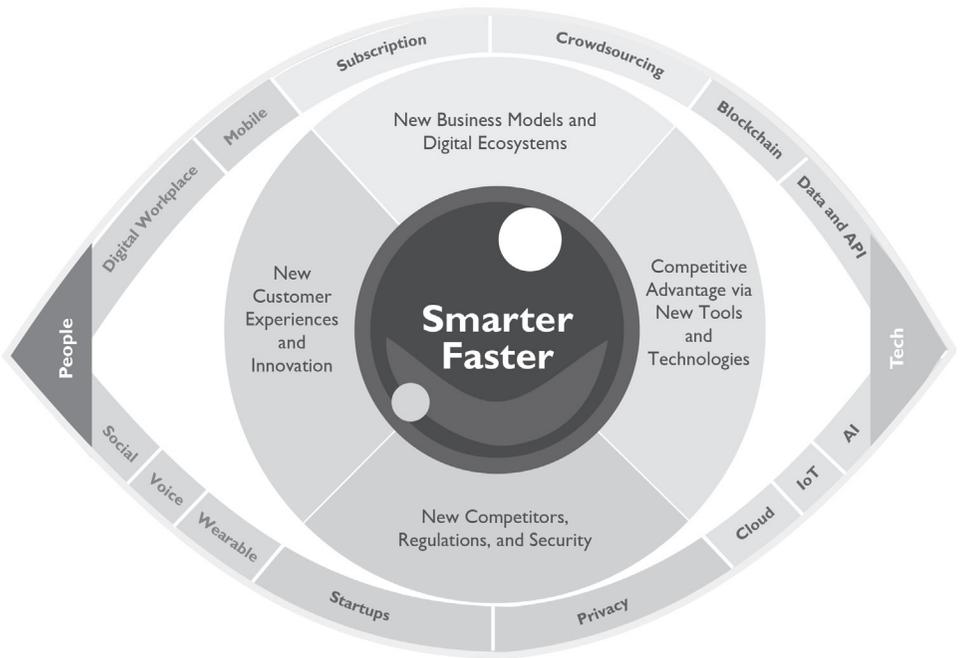


Figure 7-2. How smarter-faster organizations see the world through a digital lens