



Making agile transformation real

How TBM enables modern IT delivery

How do you deliver quality products and services that customers want, when they want them, and how they want them? More importantly, how do you drive profits for your business at the same time? In today's cloud, data, "'X'-as-a-service" world, where technological advancements are accelerating at ever faster rates right along with increasing customer demands and heightened global competition, all businesses are under pressure. The statement that every business is a technology business is overused for good reason: it's true. And it's true across industries and sectors, old and new. All businesses are being pushed to deliver faster, to adapt quicker, and to add value to the overall business at the same time.

IT leaders must respond to these accelerating forces in order to enable value creation. Over the last decade, most IT organizations have switched to delivery models allowing for faster time to value through iterative development and have seen great initial success. Unfortunately the initial benefits of a more agile operating model have reached a plateau due to the headwinds outside of the IT organization.

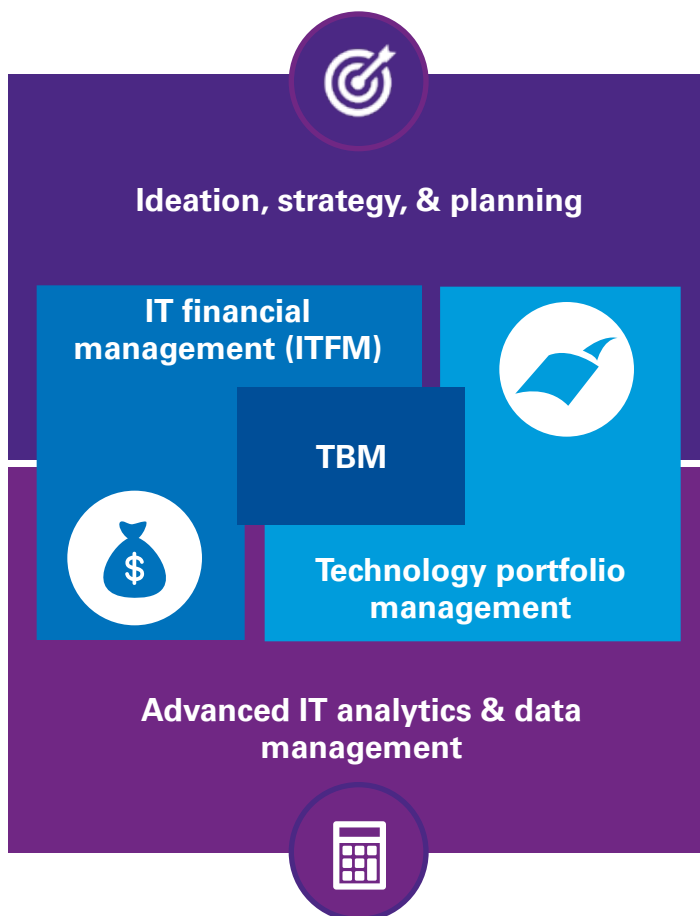
There has been a renaissance inside of the IT organization to help deliver work incrementally using concepts such as agile, scaled agile, lean, and DevOps. However, other areas outside of IT continue to trail. Delivering on the promise of agile requires engagement by the whole organization, investigating and addressing the gaps in their operating model to unlock the speed and flexibility required to deliver the value that customers demand. Finance organizations and the traditional funding models have become the single largest limiting factor for progress. A new way of thinking on how to prioritize, fund, manage, and measure investments is evolving away from a focus on applications and platforms to exploring impact on entire value chains.

We believe that Technology Business Management (TBM) offers the tools that IT and the business can use to address the gaps of the old models and accelerate the adoption journey. TBM has been the biggest driver in the market to link technology resources to business objectives and make those linkages transparent. By exposing IT cost drivers to the business and then subsequently driving changes in behavior and consumption, TBM enables organizations to shape their technology portfolios in order to realize business objectives and meet demand with real-time cost and performance insights that drive decision making on where to invest, divest, and tolerate—and why.

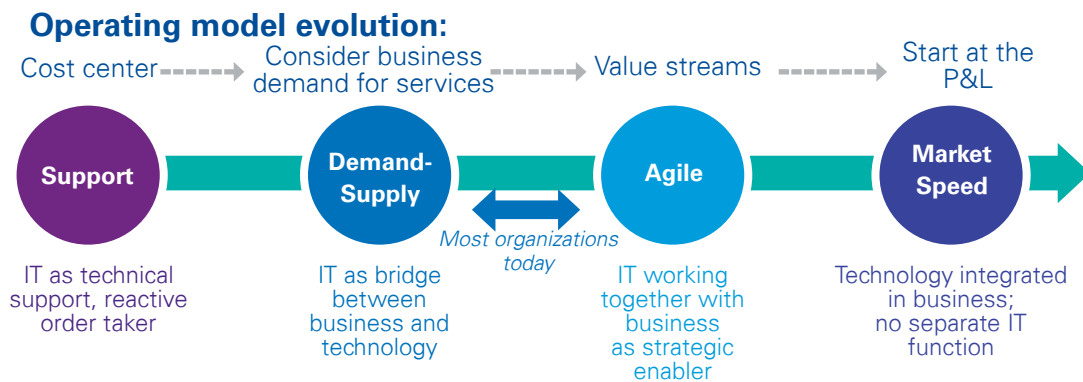
This paper will describe how the four tenets of TBM, which include:

1. *Ideation, strategy and planning*
2. *IT financial management*
3. *Technology portfolio management*
4. *Advanced IT analytics and data management support and accelerate the move to a more agile organization.*

We start with an overview of the four common IT operating model archetypes and discuss how TBM can help both increase the mode of operation within each archetype and help move toward more mature archetypes.



IT operating model history and evolution

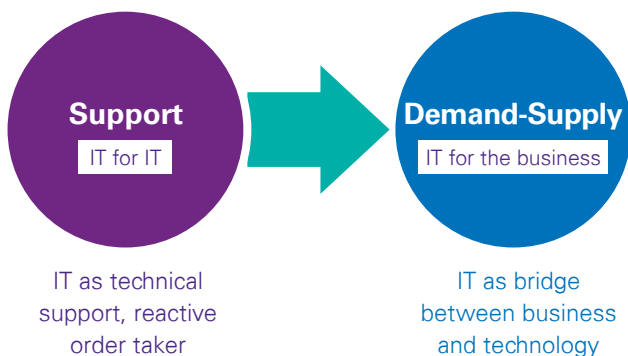


Organizations employing support and demand-supply operating models historically focused their attention on investing in and managing the front-line functions that served as the revenue engines of the company. Back-office functions such as IT, HR, and Finance were treated as stand-alone General and Administrative (G&A) expenses: the cost of doing business. The objective was always to keep these expenses to a minimum or at least in tight control. In this support model, IT operated on the same playing field as every other G&A overhead function—in a silo, reactive, only called upon when needed and charged with executing projects it had little to no input into. The demand from the business was ad hoc and IT funding was not differentiated from other support functions. In this way, IT was viewed as a cost center, as order takers disconnected from the business with no recognition that its budget was being used to deliver on the operational objectives of the business.

But with technology permeating every aspect of business, driving productivity and efficiency gains of five to fifteen percent in the last 15 years,¹ technology has become a key enabler of business strategy and execution. IT responded with more disciplined approaches to service management and began operating as an internal service provider, slowly changing the perception of IT from a standalone function cost center to that of a business partner. This represents the shift to a demand-supply operating model where companies have mechanisms to capture the demand for IT services with the organization's ability to supply, or meet, this demand through delivery.

Most organizations today operate in some capacity of the demand-supply model, where IT serves as a bridge between business and technology.

Legacy operating models: Support and Demand-Supply



According to the Harvey Nash KPMG CIO Survey 2018, 55 percent of organizations rate their IT/business alignment as "moderate" or worse. The successful ones are favoring customer/revenue growth over inward-facing activities, and have an acting or dedicated Chief Data Officer (CDO), making organizations more effective at leveraging customer data.

¹ [US Bureau of Labor Statistics](#)

Moving towards the Market Speed model

"The technology lifecycle is not just becoming shorter but it has become a continuously evolving part of the fabric of our business. There is an industry-wide shift towards agile operating models and ways of working, designed to make technology and business one and the same. Multi-year projects that also take years to deliver any value are dead."

– Claudine Ogilvie, CIO, JetStar Airways



IT working together
with business as
strategic enabler

To keep up with the pace of change, IT organizations have begun adopting new delivery models. While some still struggle with finding their voice within the business, others are moving beyond simply helping shape business demand, and are now working with their front line business partners in anticipating external customer needs to exceed customer expectations. Though

such capabilities are only recently starting to emerge in the marketplace, key TBM activities can help accelerate the shift to the new IT operating models.

Agility is the new reality. The move to agile will be different for each company, with some further along the journey than others, but will require removing boundaries and improving performance and outcomes for the company as a whole.

Many businesses today are focused on agility and data exploitation as competitive differentiators. Scale and efficiency is giving way to smaller and faster. However, at this early stage, many companies are approaching agile in silos on a project-by-project basis. Moving to a more

holistic agile operating model across the entire enterprise requires a foundational shift in the way organizations think about all processes.

TBM helps organizations understand where they are along the continuum of operating models and enables the shift to an Agile model by building transparency and linking IT assets and activities to business capabilities, strategy and financials. In the Agile model, funding shifts from funding projects to funding value streams. Concepts such as velocity (speed), epics (new projects), and value streams (variance reporting) become the new language of IT execution with emergence of new data sources to support the Agile portfolio and value streams. The data collected becomes predictive and automated to support DevOps.

Scaling agile methods tend to be an organizational weakness. While organizations are increasingly using methodologies to speed up project delivery, one in five respondents report that their organizations are not at all effective at scaling agile methods enterprise-wide. Organizations need to find the best-use case that can be their digital lighthouse and scale the transformation from that foundation; scaling agile is not a one-size-fits-all approach. Source: Harvey Nash Survey 2018

For a premier U.S. insurance company, IT leads the way in shifting to an Agile model

- 1) In response to changing market conditions and mounting cost pressure, the IT organization underwent a transformation to align resources to be product focused rather than project focused.
- 2) They identified a partner champion within finance to help them start to change how finance thinks about funding IT investment, specifically, they moved to funding the new resource model which was aligned to products (rather than projects).
- 3) IT is now expanding their "partner champion" model to work on nudging the business to also realign to be a market speed organization.

The future is the market speed organization

"There is no distinct technology function anymore. The boundaries between the departments are becoming increasingly blurred. Today, it is imperative to work in integrated teams with people from all units to focus on specific topics or technical components."

– Markus Sontheimer, CIO, Deutsche Bahn Schenker, Germany as quoted in the Harvey Nash Survey 2018

"IT as a cost function is dead. The role of the CIO needs to evolve to reflect this reality if they want to remain a strategic partner to the business."

– Denis Berry, Principal, Advisory, KPMG

Market Speed

IT for the product

Technology integrated
in business;
no separate IT
function

In a market speed model, IT is part of the product development lifecycle and IT costs are part of Cost of Goods Sold (COGS) and not part of G&A expenses. Such a shift requires a significant change in thinking and execution. By bringing financial transparency to the IT function and connecting the work to business outcomes, TBM will be a critical tool in the evolution of the IT function from service provider to

product manager. In effect, the function is moving from "IT for IT" to "IT for the product." TBM will help facilitate IT being funded as part of product development lifecycles with metrics tied to product profitability and growth. In this market speed model, IT metrics are tied to product profitability, customer experience, and trust.



How TBM can accelerate change

Where should we invest?

Ideation, strategy, and planning helps companies plan for the future, encourage new ideas, articulate the benefits and value of those ideas, and incorporate them into both short- and long-term plans. How companies execute this function under each operating model is vastly different.

	Support	Demand-Supply	Agile	Market Speed
	IT for IT	IT for the business	IT for the customer	IT for the product
Ideation, strategy & planning	<ul style="list-style-type: none"> — Demand process consolidated under the PMO. MBA-style business cases — Business demand is captured periodically throughout the year as part of annual planning cycles — Contained within IT, app/tech specific 	<ul style="list-style-type: none"> — Demand (project) and request (operational) processes connected — Increased focus on efficient architecture function helps consolidate demand and drive to one system/platform 	<ul style="list-style-type: none"> — Lean business cases, leading indicators — Architecture function focus shifts from systems/platforms to value streams & SOA 	<ul style="list-style-type: none"> — Product-oriented business cases — Collaborative effort, especially with customer-facing products

For companies operating under the **Support** model, the demand process is typically consolidated under the Project Management Office (PMO) using MBA-style business cases. Business demand is application and technology specific and only captured periodically as part of an annual planning cycle where IT is not involved in helping shape the strategy to meet the demand. In addition, IT organizations are left to balance disparate project demand (dev) with incremental, unplanned service demand (ops) which places an additional burden on already overstretched resources.

As organizations mature and shift to the **Demand-Supply** model, demand (project) and request (operational) processes become connected. There is increased focus on an efficient architecture function, which helps to consolidate demand and drive to one system/platform. Though ROI-type analyses are performed on a project- by-project basis, IT and the business are beginning to align and measure IT investment returns with tangible business value. However, demand is still segmented at the project level, which frequently represents an incremental investment in an application or system. In both the supply and demand-supply models, IT demand was determined, prioritized and approved once a year using lagging indicators, which resulted in a significant gap between demand, funding and start.

In an **Agile** model, value streams, as opposed to individual projects, are funded, and start based on lean business cases and leading indicators in order to create the capacity the

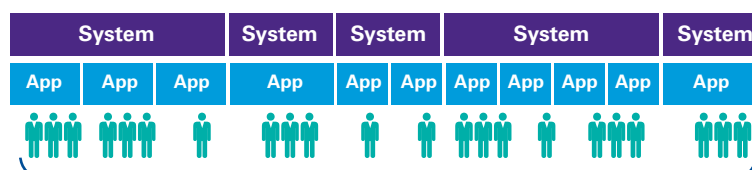
business needs when it needs it.

Projects that use non-agile delivery methods are typically scheduled to start in the future, creating the need to refresh and reassess the business case against the most current financial and resource constraints. Agile prioritization requires organizations to constantly reassess and therefore enhances prioritization for both new-incoming initiatives as well as previously scheduled initiatives to deliver the most value within organizational constraints and priorities.

By reducing the cycle time between prioritization cycles, the business case is more likely to remain accurate. This allows business, enterprise architecture (EA) and IT leaders to address demand as it happens and re-prioritize quickly without having to ask for funding. Finance is still part of the process, validating the business case and assuring the assumptions are correct, however budgets do not need to be re-approved.

As it does for support and demand-supply models, TBM practices will continue to help organizations plan for the future and encourage new ideas. Core TBM capabilities of measuring and tracking value, and aligning IT demand with business strategy can be quickly shifted to focus on complete value chains, rather than individual projects, thereby helping IT and the business articulate the benefits and value of those ideas and incorporate them into both short- and long-term plans.

Support & Demand-Supply model



Traditional models focus on each individual app enhancement project.
Difficult to track and measure true business value.

Organizing resources around specific systems and applications

Identifying and tracking business value becomes easier if you measure outcomes at the value stream level versus the project level outcomes for ROI. Delivery of projects is replaced by delivery of epics, which are prioritized through a business case which uses a leading indicator. Finance validates business cases—they are a speed bump, not a roadblock



Fast fact: “Innovation Accounting” is a term coined by Eric Ries in his book, *The Lean Startup*. The Innovation Accounting framework consists of three learning milestones: minimum viable product (MVP) – establish a baseline to test assumptions and gather objective data. Tune the engine – quickly adjust and move towards the goal, based on the data gathered. Pivot or persevere – decide to deliver additional value, or move on to something more valuable, based on the validated learning. Lean thinking defines value as providing benefit to the customer; anything else is waste.

Companies must take a collaborative approach to planning and creating product-oriented business cases in order to move beyond value chain ideation and integrate IT capabilities into product development. This is critical for companies producing consumer products.

Funding ideas

In the TBM tenet of **IT financial management (ITFM)**, companies decide how to best manage costs with the goal to re-invest savings and efficiencies back into leading technologies such as AI, robotics, and cloud. Additionally, they seek to understand and manage cost at all levels of IT, providing the business transparency into total cost of ownership (TCO) and consumption.

ITFM capabilities are limited in the **Support** model with minimal visibility and managed through general ledger line items. Historically, IT spend has been treated as a cost center with budgeting an annual activity driven from the bottom up and often capped as a percent of revenue leading to a disconnect between the general ledger view of the IT budget and the way IT is actually consumed.

Additionally, this approach leads to a lack of understanding about demand and cost drivers making forecasting a guessing game; complete with a lack of incentives and accountability.

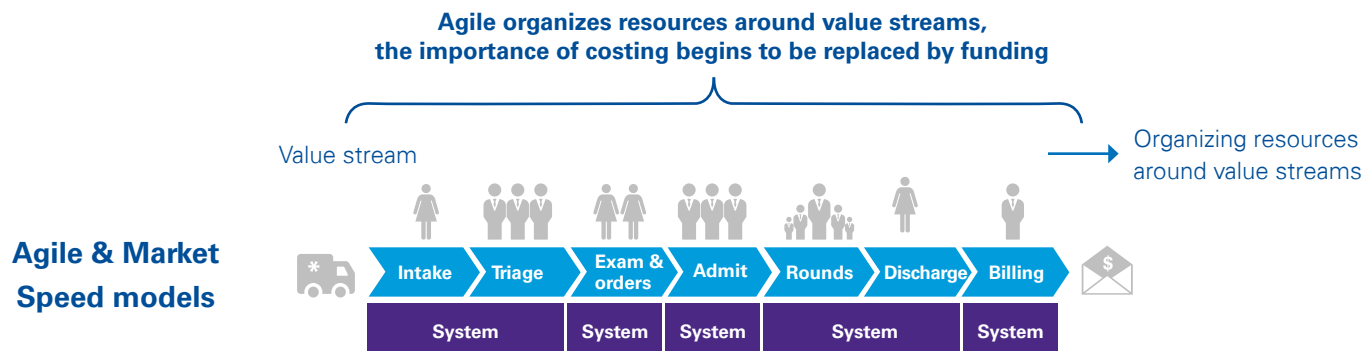
In **Demand-Supply** organizations, better TBM principles around ITFM are implemented and purpose-built tools are introduced into the organization, allowing finance and IT to identify, manage, and track the TCO of IT services. Additionally, as data and processes mature, companies are able to do a full chargeback of those services to the business units to help drive accountability and cost optimizing behaviors.

To support the business as it moves to **Agile** delivery models, IT spending will have to shift from “running the business” to “growing the business” with the IT portfolio rationalized and well-aligned with business priorities. In this model, finance funds resources and vendors, and then IT and the business determine what to build (see diagram).

	Support	Demand-Supply	Agile	Market Speed
	IT for IT	IT for the business	IT for the customer	IT for the product
ITFM	<ul style="list-style-type: none"> Minimal visibility, managed using traditional accounting structures Cost centers aligned to business units Resource based views 	<ul style="list-style-type: none"> Full TCO transparency enabled with purpose built tools Services aligned to business units 	<ul style="list-style-type: none"> Lean funding model (for development) e.g finance funds resources & vendors, then IT & business determine what they build 	<ul style="list-style-type: none"> Dynamic Investment product funding model (for operations) Accountability across the organization, product owners carry the accountability of managing technology COGS

There are three actions a CFO can take to reduce friction and support modern delivery:

1. Update financial policies to support the CIO's adoption of the innovation agenda, agile, cloud, and DevOps
2. Shift left and rollout a Venture Capitalist (VC)-like dynamic investment funding model to accept trusted duplicity and to accept failure as an option in order to deliver more successful capability at market speed
3. Shift left and delegate decision making downwards by gaining consensus early and establishing trust



This will require a new way to think about TCO. In the agile model, DevOps, software (code) and infrastructure must support rapid automation, orchestration, and release. On the ground, this means app development teams that used to be organized by systems will be reorganized by value streams in effect becoming an Agile Release Train (ART)—the primary mechanism of value delivery to the end customer.

Current approaches to TCO simply don't work in an agile operating model. That said, there are proven ways to improve transparency and link IT spend to value:

- Showback/chargeback – By combining consumption data with service pricing, an IT invoice can be produced that shows the allocation of IT costs based on actual usage by each business unit.
- Budget and forecast automation – Mapping the general ledger accounts to the service portfolio enables the business to budget by the services they consume.
- Scenario based planning – Building on the automated budgeting and forecasting capability, organizations can model the impact of alternative strategies or growth rates on IT costs and demand.

Eventually, in the final **Market Speed** model, funding for IT investment will become part of overall product “dynamic investment” funding models and managed as

part of overall operational demand. Product owners are accountable for managing and optimizing COGS and gross profit, even for technology inputs.

In this model, IT leaders can seize the role of portfolio manager to create a Lean IT Finance model that continuously funds technology investments by:

- Collaborating with finance to capitalize agile development
- Funding requirements before details are defined
- Delegating trust to business and technology leaders by enabling new tools, data, and analytics to make smarter and faster decisions
- Reporting velocity and value to the board

Benefits of dynamic investment

A leading energy company introduced lean funding by creating an annual “innovation budget” for its IT function. Finance approved a pool of funding to be used at the discretion of the functional leader to invest in new ideas for the business with no strings attached, no ROI expectations, and no additional approvals required. These small investments ended up with the highest ROI of any projects executed year after year.

Managing technology

In the **technology portfolio** tenet of TBM, organizations manage more than projects—they must understand how IT interacts with the business and constantly evaluate projects, services, and application portfolios to maximize value through an iterative process.

	Support	Demand-Supply	Agile	Market Speed
	IT for IT	IT for the business	IT for the customer	IT for the product
Tech portfolio	<ul style="list-style-type: none"> Annual portfolio management process, resources are typically aligned to the business via cost center Portfolios managed in silos, eg. tech, app and platform, ITIL service focused (i.e. tech catalog) 	<ul style="list-style-type: none"> Project and operational portfolio's connected Costs and activities mapped to business services 	<ul style="list-style-type: none"> Agile portfolio Value stream portfolio (IT for the end consumer) 	<ul style="list-style-type: none"> COGS vs SG&A portfolio's Much of the traditional technology portfolio now sits in the business P&Ls and is managed there through an iterative process

Within organizations that operate under the **Support** model, IT portfolios have grown organically from the demands of the business, through massive investments in ERP, CRM, and supply chain automation, as well as from merger and acquisition activity. The result is portfolios bloated with redundancy, excess capacity, and underutilized and/or unused assets.

More mature organizations that operate in the **Demand-Supply** model have technology portfolios that are divided into four main areas: applications, infrastructure, projects, service provider or vendors. Though these portfolios have many interdependencies, they are frequently managed and optimized independently. At best, the costs and activities are mapped to business services.

The shift to an **Agile** model is dramatic—the technology portfolio is now value-stream-focused and maps to specific customer needs. IT's method of delivery and organization may also shift to accommodate this new way of thinking. This is IT for the end consumer. To facilitate the shift from a service-based portfolio to a customer-focused value stream based portfolio, the current technology portfolio has to move to a modern architecture aligned to value streams.

By leveraging the cost and operational transparency, TBM can accelerate the shift in operating models by enabling

organizations to perform:

- Application portfolio rationalization – Implementing new applications in response to customer/business demand.
- Infrastructure consolidation and virtualization – Shifting workloads from dedicated to virtual servers can drive effective utilization rates to 80 percent or greater and result in server reductions from 20 percent to 60 percent.
- Vendor rationalization – Consolidating business with a smaller number of strategic partners can result in leverage to gain better pricing deals while strengthening relationships.
- Investment (project) portfolio optimization – The program investment portfolio, sometimes called the change the business portfolio, typically accounts for 25 percent to 35 percent of the total IT budget. Improving strategic alignment and ensuring the most strategically important initiatives are the priority will drive value.

In the **Market Speed** model, the technology portfolio sits in the business P&L and is managed there through an iterative and dynamic process. Technology portfolios can be segmented and prioritized as those that are part of COGS versus those that are part of SG&A expenses.

Measuring Success

The last tenet of TBM, **analytics and data**, helps organizations move past reactively managing cost to leveraging data, analytics, and insights to predict IT and business outcomes.

	Support	Demand-Supply	Agile	Market Speed
	IT for IT	IT for the business	IT for the customer	IT for the product
Analytics & data	<ul style="list-style-type: none"> Disconnected metrics Date is application specific, not leveraged across the enterprise, metrics are function specific, not tied to business strategy 	<ul style="list-style-type: none"> Balanced scorecard by service Use of performance scorecards tied to clear objectives and some business strategies. IT data becomes integrated and balanced 	<ul style="list-style-type: none"> Project execution and operations deliver using velocity (speed), epics (new projects), value streams (variance reporting) New data sources to support the agile portfolio and value streams Data becomes predictive and automated to support DevOps 	<ul style="list-style-type: none"> Supply vs demand, price variance, SLAs customer experience IT metrics are tied to product profitability customer experience and trust (e.g. trust.salesforce.com)

In the legacy **Support** model, metrics are typically specific to IT operating functions (e.g. number of incidents), not necessarily the business strategy. Data is also viewed in the silo of the application/function it pertains to and not leveraged across the enterprise.

However, in the **Supply-Demand** model, performance scorecards are tied to clear objectives and broader business strategies and capabilities. IT data starts to become better integrated and balanced across platforms, and tied to specific business objectives.

Leveraging the cloud for applications (SaaS), infrastructure (IaaS), and platforms (PaaS) has become an ingrained component of every CIO's IT portfolio in today's digital economy. The numerous drivers—such as CapEx/OpEx shift, agility, and bursting capability—reflect the rapidly expanding use cases that new digital, cloud-based business models are dictating. As organizations scale their **Agile** methodologies, they must track new types of data and metrics. From agile team resource composition, productivity, and effectiveness, to overall program performance, backlog, and releases, currently used systems and tracking tools may not be enough.

The TBM function has long been a key data integrator and business intelligence (BI) function, stitching together disparate financial and operational data to craft a meaningful value story for IT and the business. TBM can

ensure all the new sources of data and data analytics are aligned to the business and value streams and improve performance by encouraging and driving speed or velocity. The result will be data-driven decisions and outcomes that propel the business forward, keep pace with change, and enable new disruptive business models.

With new sources of data come new analytic techniques and a search for insights. Organizations will apply their usage of automation and data mining techniques over planning, delivery, and outcome data to enhance visibility and tracking across those processes. New insights will allow teams to capture timely data to analyze velocity, deployment, and customer response, which will then better inform ARTs, creating a feedback loop of decision making and course correction.

The shift to an agile enterprise approach will not be the end of change. As IT becomes an inseparable component of client facing products and services, IT analytics and metrics will be ingrained within the measurement of product profitability, customer experience, and trust. Key analysis will center on customer facing product/service:

- Supply versus demand
- Price variance
- Service level agreements
- Customer experience



Conclusion and next steps

"Just as boards have become more technically aware, the onus is on IT to become more business aware. IT needs to partner with the business and move up the value chain from being a service."

– Kevin Robins, EVP and CIO, Sage, UK

The future of IT is the future of business. This point cannot be overstated. The most effective operating models will see technologists collaborating with the business throughout ideation, ITFM, project and portfolio management (PPM), and analytics. They will also be transparent, with the value of IT to deliver revenues clear. By exposing IT cost drivers to the business and then subsequently driving changes in behavior and consumption, TBM enables organizations to shape their technology portfolios in order to realize business objectives and meet demand with real-time cost and performance insights that drive decision making on where to invest, divest and tolerate—and why. This is critical in the digital economy and particularly when shifting to agile delivery models across the enterprise.

How KPMG Can Help

KPMG can help you become the strategic technology partner that your business requires using TBM. We offer an experienced viewpoint and objective advice to help enable the business of the IT organization. Our professionals work closely with you to provide candid assessments and recommendations, as well as valuable support to help in the change process. Regardless of which operating model your organization currently runs, we can help you craft a vision and roadmap to move your organization to the next level and meet the changing needs of your unique businesses.

To learn more about how KPMG can help accelerate your agile transformation with TBM, visit us at:

<http://read.kpmg.us/tbm>

We understand that evolving organizational capabilities across operating models is extremely difficult, so start small then learn, adjust, and expand.

- 1) Begin thinking of your business in terms of portfolios: Applications, Projects, and Services. They are intrinsically linked and provide structure to seemingly disparate processes. These will form the basis for optimization and transformation conversations.
- 2) Get TBM involved early
 - i. Enable the organization with cost and data transparency
 - ii. Start thinking about your organization's value chains and products, and how to align your models and processes
 - iii. Be a part of the prioritization and funding conversation
- 3) Find and develop partner champions across the organization
- 4) Start small— think pilots. Fund a small innovation budget or fund a product owner. Be comfortable operating in a bi-modal model (legacy and agile) for some time. Expand on the successful experiments.
- 5) Begin tracking agile metrics and data. Start building comfort and slowly replace legacy metrics as the organization better understands the data and use in decision making.

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