IDC MaturityScapes

A Practical Guide to Deriving Value

IDC

Analyze the Future

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Combined with focused IDC research, benchmarking, expert insights, and an ongoing commitment to developing forward-thinking 3rd Platform insights, IDC MaturityScapes can be a critical cog in enabling the CIO role in the enterprise.

IDC MaturityScapes: A Practical Guide to Deriving Value

IDC OPINION

IDC MaturityScapes were created to provide a detailed explanation of the stages of 3rd Platform adoption from the simplest, unstructured ad hoc stage to the advanced, systematized optimized level. IDC MaturityScapes offer an opportunity for CIOs and their enterprise partners to have a structured way to identify their current level of capability, or maturity, and the gap between where they are and where they want (or need) to be to maintain competitive balance or achieve industry superiority. Combined with focused IDC research, benchmarking, expert insights, and an ongoing commitment to developing forward-thinking 3rd Platform insights, IDC MaturityScapes can be a critical cog in enabling the CIO role in the enterprise. This document contains a detailed explanation of the emerging best practices for using the wide variety of IDC MaturityScapes. This document offers insights into how IDC MaturityScapes can be used in the following ways:

» As a simple-to-use methodology to enable CIOs to align 3rd Platform business value goals with IT strategy

» As a tool to identify where investments in people, process, and technology may or may not be consistent with what the business actually requires

» As an input to a variety of business-IT dashboards that monitor and measure IT capabilities against changing 3rd Platform best practices

» As a road map for overall improvement of IT processes, communications, and business integration

In This Study

This IDC study is intended for CIOs and other executives who are responsible for developing the strategy and planning for IT investments in cloud sourcing, Big Data, mobile technologies, and social networks for the enterprise. IDC MaturityScapes offer a means to that end. IDC MaturityScapes cover a range of issues and management areas that are the basis for IT management, but they also focus on a particularly important business area — the adoption of the 3rd Platform.

This document considers important questions that affect the successful adoption of IDC MaturityScapes. These questions include:

» What is a maturity model? What are the stages of IT maturity? What do IDC MaturityScapes mean in terms of IT leadership and their ability to support business goals?

» What are the differences between IDC MaturityScapes? What are the best practices in identifying how IDC MaturityScapes can be used?

» How can IDC MaturityScapes be used to assess the gap between current IT 3rd Platform competency and business requirements?

» What kinds of investments in people, technology, and process improvement are essential to maintaining alignment with business goals?

» When is it appropriate, or inappropriate, to improve IT maturity?

» What are the limitations of a maturity model in shaping IT strategy? What other resources are available?

IDC MaturityScapes are a diverse set of documents; they cover strategic IT issues as well as lower-level tactical concerns. IDC MaturityScapes offer the ability to focus on a few key dimensions of change that are most critical to enabling IT management to support the business use of the 3rd Platform.

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IT Executive Program Research Agenda

This IDC continuous research program is focused on the issues, challenges, and opportunities confronting business and IT practitioners. Our research agenda is founded on the strategic goals that inform our research objectives. At the heart of our planning process is the need to balance the state of established best practices with the pressing needs of our clients as they

confront emerging technology management challenges. Our agenda is organized around 12 major themes (see Table 1).

TABLE 1

IT Executive Program Research Agenda Themes

The 12 Strategic Themes

IT Strategy and Innovation	Infrastructure and Cloud Services
Business and Enterprise Architecture	Data Management
Application Provisioning	Mobility
Service Management	IT Security
Vendor and Sourcing Management	Customer Experience
IT Talent Management	Big Data/Analytics

Source: IDC, 2014

Situation Overview

Maturity models have been in existence for at least 20 years in one form or another. Early models emerged around the same time as the rise in interest in business process reengineering (BPR) and the advent of the IT Infrastructure Library (ITIL). Maturity models were initially focused on improving software development by systematizing the processes while standardizing the roles, skills, and functions involved in creating applications. One of the first significant entries was the Capability Maturity Model (CMM), which was designed to foster a culture of continuous improvement along the lines of Six Sigma, which emerged later. Both methodologies are concerned with increasing repeatability or reuse while also improving quality.

Over time, maturity models that focus on other aspects of organization and technology have emerged. In almost all cases, the maturity models are self-contained in that they assume a path from mediocrity to excellence that can be followed without reference to the outside world.

IDC MaturityScapes, on the other hand, are designed to be used assuming change in the IT ecosystem — as a result of new technological advances, the maturation of existing technology use, or the integration of technologies, like social and mobile applications, that were previously considered to be separate platforms. These maturity models are particularly intended for enterprises making significant, business-transforming investments in the 3rd Platform.

Maturity models are not a standalone product in the sense that they answer every question. Maturity models are, however, a tool that can quickly help a CIO identify the key gaps in 3rd Platform competency and maturity that are inhibiting the IT organization from fully supporting business goals.

The individual technologies — social applications, mobile IT, cloud services, and Big Data/analytics — are each disruptive in their own right. In combination, these technologies are changing the way business gets done on a daily basis.

The challenge for leaders is that the 3rd Platform ecosystem is changing constantly, requiring a continuous process of reassessment of goals and actions. CIOs need a model for 3rd Platform adoption that is updated as conditions change, whether the enterprise goal is to be a 3rd Platform innovation leader or simply to maintain competitive balance. IDC MaturityScapes, whether used singly for assessing a particular area of maturity or to assess a group of IT management areas (e.g., service management, strategy and innovation, and IT talent management), are intended to fill that need.

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To use a maturity model effectively, it's always necessary to be aware of the changing context within which it operates. For example, the complexity of developing an enterprise service strategy can be greatly reduced by using IDC's Service Management Maturity Model (see *IDC MaturityScape: Service Management Strategies — Getting There from Here*, IDC #244523, December 2013).

By itself, the model can help IT executives understand the path that leadership should follow, for example, to get from one stage of service maturity to another. Beyond that, an IDC MaturityScape can aid in the discussion of IT strategy and technology investments — helping CIOs gauge where their enterprise is in relation to that of their peers and competitors, best achievers, and the least invested in 3rd Platform IT adoption — in terms of business value as well as IT maturity. That extra quality of the model can greatly assist the calculation of how and where IT investments should be made and identify how critical it is to the business to improve in any given area of technology management.

The last point underscores another attribute of the IDC maturity framework. Some of the models can be used to support high-level planning. Others are better suited to a more operational continuous improvement cycle. Still others may serve both purposes.

The IDC MaturityScape framework incorporates all levels of models, aligned to all kinds of IT functions and services. It is not a one-size-fits-all approach but recognizes that IT managers can benefit from a similar methodology that has many end uses.

How Do Maturity Models Work? The Five Stages

Most maturity models follow a five-stage format that represents a progression from (ad hoc) disorganization to a highly systematized environment (optimized). IDC MaturityScapes use the same format. The characteristics of the five stages of maturity are:

» **Stage 1: Ad hoc —** Few processes are defined and are occasionally even chaotic; success depends on individual effort.

» **Stage 2: Opportunistic —** Basic project management processes are established to track cost, schedule, and functionality. The necessary process discipline is in place to repeat earlier successes on similar initiatives.

» **Stage 3: Repeatable —** The process for both management and technical activities is documented, standardized, and integrated into a standard software process for the organization.

» **Stage 4: Managed —** Detailed measures of the process/initiative are collected. Process/ initiative is quantitatively understood and controlled.

» **Stage 5: Optimized —** Continuous process improvement is enabled by quantitative feedback from the process and from piloting innovative ideas and technologies.

These are fairly standardized definitions meant to convey a general sense of how leadership and organizational behavior change across the spectrum from ad hoc to optimized. The value in IDC MaturityScapes becomes apparent when these generic stage attributes are applied to actual IT challenges — for example, the development of a "mature" approach to strategy and innovation. If an enterprise were to focus on developing an approach to IT innovation for the 3rd Platform, it might cast the five stages in the following terms:

» **Stage 1: Ad hoc —** Innovation by accident. Management goals for innovation are unstated or poorly communicated with no process for follow-up and monitoring. Little or no ability to recognize or elevate ideas to development and implementation.

» **Stage 2: Opportunistic —** Innovation goals are articulated but the organization is not structured to coordinate response and execution. Processes are informal and disconnected. Metrics to gauge success don't yet exist.

» **Stage 3: Repeatable —** Organizational roles have been assigned to implement and oversee innovation initiatives. Processes and services are identified, but management and metrics are focused on performance of discrete organizational functions rather than end-to-end integration of innovation processes.

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Measurement systems are in place to gauge the value and business effectiveness of innovation services, with clear processes to leverage best-in-class practices. IT contributions to innovation are measured in terms of their business value.

» **Stage 4: Managed —** Management has clear guidelines for innovation based on business value. There is a well-defined process for developing ideas into projects. Organizational roles are coordinated to streamline rapid delivery. Innovation support services have been defined as part of the service inventory.

» **Stage 5: Optimized —** All innovation initiatives are coordinated through an office of innovation under the direct supervision of an executive innovation officer. Measurement systems are in place to gauge the value and business effectiveness of innovation services, with clear processes to leverage best-in-class practices. IT contributions to innovation are measured in terms of their business value.

The application of the model to a specific management concern is where real problems start to meet real solutions.

Dimensions of the Model — Focusing on Specifics

IDC MaturityScapes literally have a second "dimension." Each model is built around an analysis of approximately four *dimensions*. These are specific attributes of the model that must be addressed to improve performance and achieve excellence. The dimensions of the maturity model are often associated with issues that arise from having to implement change to people, technology, and processes, but they can be even more specific.

For example, Table 2 illustrates the five dimensions that were used to expand IDC's Big Data and Analytics Maturity Model (see *IDC MaturityScape: Big Data and Analytics — A Guide to Unlocking Information Assets*, IDC #239771, March 2013):

» Intent: Strategy, sponsorship, and justification

» Data: Relevance, quality, and availability

» Technology: Adoption, performance, and functionality

» People: Skills, culture, and organizational structure

» Process: Tracking, analysis, and decisioning

The five dimensions each point to a number of sub-dimensions (data describing relevance, quality, and availability). These are the key factors that the model (in this case) uses to chart a course for data maturity — which in turn supports a more coherent overall Big Data strategy for the 3rd Platform (see Table 2).

TABLE 2

Big Data Maturity Model Dimensions

Dimensions	Sub-dimensions
Intent	• Strategy • Sponsorship • Justification
Data	• Relevance • Quality • Availability
Technology	• Adoption • Performance • Functionality
People	• Skills • Culture • Organizational structure
Process	• Tracking • Analysis • Decisioning

Source: IDC, 2014

The dimensions and sub-dimensions are applied to each of the five stages. At that point, it's necessary to begin analyzing how an enterprise leverages the model's IT capability — from ad hoc to optimized.

Table 3 illustrates elements that were applied in IDC's IT Strategy and Innovation Maturity Model for the dimension of leadership with the sub-dimensions of:

» Vision, innovation, and ideation

» Domain/ecosystem knowledge and intelligence

» Culture

TABLE 3

Linking Stages and Dimensions

	Ad Hoc	Opportunistic	Repeatable	Managed	Optimized
Leadership	Reactive and risk averse	3rd Platform experiments	Systemic transition to 3rd Platform	3rd Platform first strategy	Visionary use of the 3rd Platform
Vision, innovation, and ideation	Random demand	Isolated islands of vision	Aligned vision	Strategic business vision (know the future), systemic innovation	Creating a business future base on the 3rd Platform
Domain/ ecosystem knowledge and intelligence	IT centric	Disjointed leverage of knowledge resources	Current business context knowledge; social business participation	Broad knowledge and networking with industry and social forums	Thought leadership, sponsorship, and leading industry councils
Culture	Reactive	Culture resistant to 3rd Platform changes	Contributive; innovation is encouraged	Activist, fosters a culture of business and IT collaboration, leverage partners and vendors for innovation	Engaged, celebrate, and reward innovation

Source: IDC, 2014

The key aspect that anchors IDC's IT Strategy and Innovation Maturity Model and other IDC MaturityScapes is the applicability to both general IT management capabilities and 3rd Platform adoption.

The Role of the 3rd Platform in Shaping IT Maturity

The insights provided by IDC MaturityScapes are especially focused on an IT executive's ability to identify the business criticality for adopting any or all of the 3rd Platform technologies — cloud services, social business, mobile, and Big Data analysis — and then shape the IT organization's planning to support business goals. IDC has recognized that many CIOs are struggling to keep pace with implications of the continuously changing 3rd Platform business environment — in part because there are no formal guidelines or tools to assess where IT is in relation to the best, and worst, business users of the technologies. Moreover, there are few tools available to help IT leaders plan for the transition from one level of adoption to another — both in establishing goals and in creating a plan to realize them.

For the most part, traditional maturity models have addressed the "how to" nature of maturity — in most cases, by identifying the characteristics and competencies of each level in terms
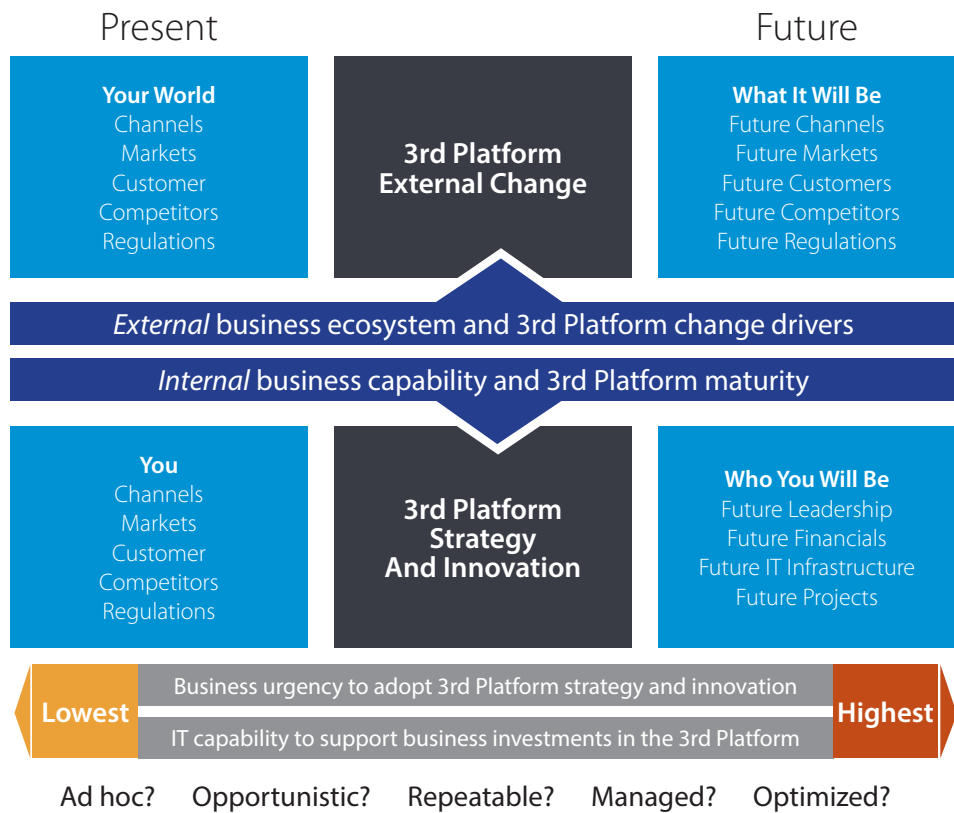
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of process, organization, technology, and other critical dimensions. This is a fine approach for static environments, where achieving excellence is a matter of process improvement and measurement alone. However, the 3rd Platform presents a broader challenge; it is developing but not yet a mature environment. Businesses are finding new ways to use 3rd Platform IT daily. The challenge for IT is to maintain excellence while adapting to a continuously changing business model (see Figure 1).

Figure 1 demonstrates that an enterprise's approach to 3rd Platform strategy and innovation is at least in part dependent on how the business reacts to external changes in markets, customers, and channels. Similarly, the path to IT maturity can seem like a rote process of analyzing and proceeding along a set path. The question for CIOs is how to align the transformation of the business with the transformation of IT on a sliding scale.

FIGURE 1

Mapping IT Maturity to a Changing 3rd Platform Business Model

Present   Future

Your World
Channels
Markets
Customer
Competitors
Regulations

3rd Platform External Change

What It Will Be
Future Channels
Future Markets
Future Customers
Future Competitors
Future Regulations

External business ecosystem and 3rd Platform change drivers

Internal business capability and 3rd Platform maturity

You
Channels
Markets
Customer
Competitors
Regulations

3rd Platform Strategy And Innovation

Who You Will Be
Future Leadership
Future Financials
Future IT Infrastructure
Future Projects

Lowest — Business urgency to adopt 3rd Platform strategy and innovation — **Highest**

IT capability to support business investments in the 3rd Platform

Ad hoc?   Opportunistic?   Repeatable?   Managed?   Optimized?

Source: IDC, 2014

Figure 2 illustrates that enterprises of all descriptions make choices. This adoption curve illustrates the maturity range of IDC customers, among the 1,000 largest companies in the world and their maturity with regard to 3rd Platform–driven strategy and innovation. The left-hand index shows the percentage of companies represented in each individual bar. For example, all of the ad hoc companies (five bars) represent about 10% of the total. The right-hand margin in red represents the cumulative total on the adoption curve, depicted in the red line that tracks the total range of enterprises (from 0–100%). IDC estimates that nearly 60% of such businesses will fall in the middle, repeatable stage. In terms of 3rd Platform adoption, this broadly populated stage represents the highest level of maturity to which most of those companies aspire. In other words, there is little point in IT trying to achieve more as long as its business partners see little or no value in doing so.

It's a critical point for IT management to understand. While a generic maturity model seems to mandate constant improvement and an aspiration to be "optimized," the real world of IT investments, risk assessment, return on IT (ROIT), and the difficulty of transforming an organization's processes, culture, and metrics often leave little room for more than adequacy.

FIGURE 2

## Adoption Curve: 3rd Platform-Driven Strategy and Innovation Maturity
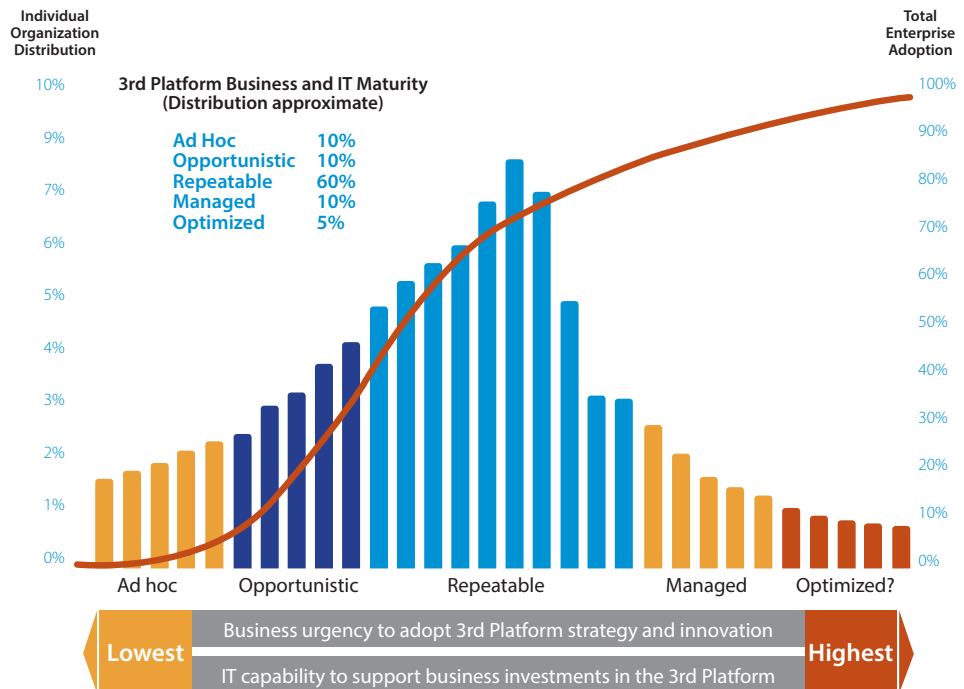
Source: IDC, 2014

Many CEOs, CFOs, and other business executives will never demand that IT exceed its peers and chief competitors. Best-in-class (managed) or visionary (optimized) use of the 3rd Platform will often be the domain of small innovative start-ups or entrepreneurial divisions of large companies.

One way to use an IDC MaturityScape is to create a kind of decision dashboard that measures business expectation versus IT capability — to as granular a level as makes sense (see Figure 3).

FIGURE 3

Maturity Model Adoption Dashboard

Maturity Model Adoption Dashboards
Aligning 3rd Platform business urgency and IT capability
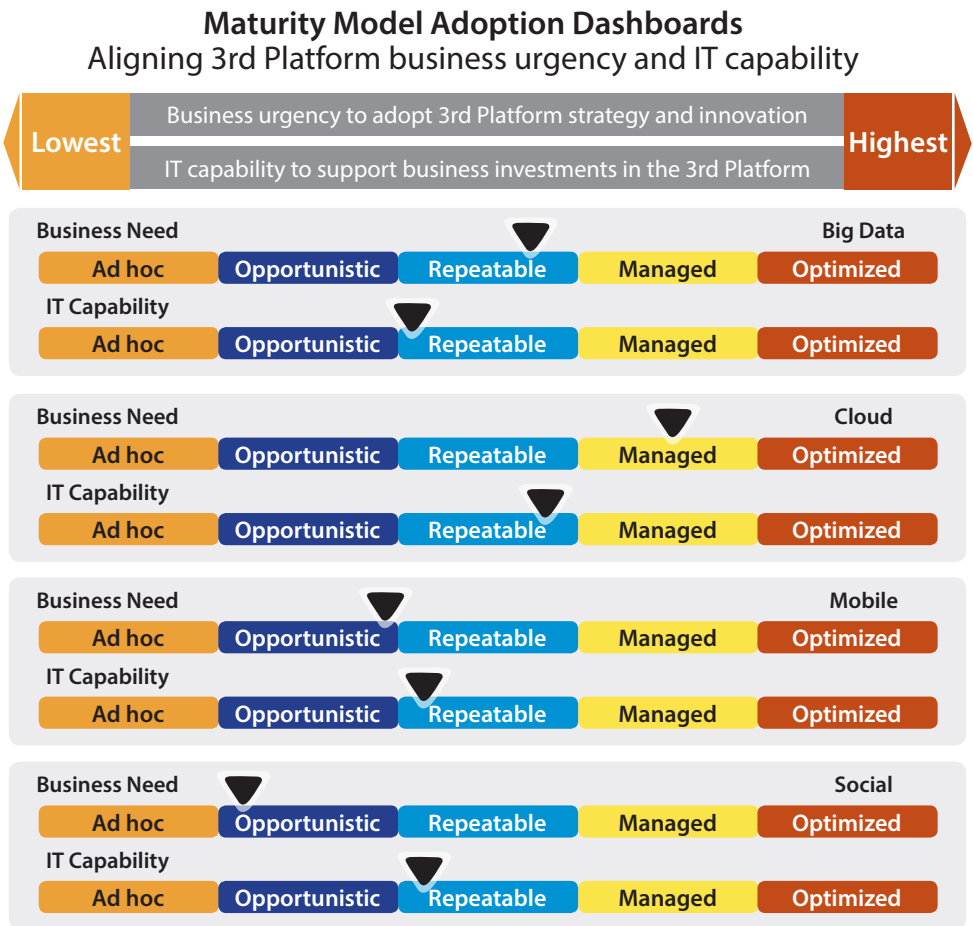
Source: IDC, 2014

The IDC MaturityScape is a tool to help CIOs link IT investment in 3rd Platform performance to business demand.

Using the Maturity Model to Align with Business Value

IDC estimates that 3rd Platform technologies and solutions will drive 29% of 2014 IT spending and 89% of all IT spending growth. From 2014 to 2017, IT spending by groups outside of IT departments will grow at over 6% per year — almost 2.5 times the rate of the IT department — led by marketing, customer service, and sales groups (see *IDC Predictions 2014: Battles for Dominance — and Survival — on the 3rd Platform*, IDC #244606, December 2013). The significance of the outside-IT spend increases when 2nd Platform traditional IT projects are eliminated from the mix. The bulk of the IT budget, up to 80%, goes to maintaining or updating existing infrastructure. The greatest increase in business-level IT spend is on the 3rd Platform.

Figure 4 illustrates how the message embedded in the stages of the maturity model changes with the role of the 3rd Platform investor — that is, the CEO, CFO, CMO, and so on.

FIGURE 4

Tailoring the Message to the 3rd Platform Buyer

	Cloud	Mobility	Big Data/ Analytics	Social Business
CEO	New business models, speed, and higher risk/ reward security	Effectiveness and efficiency	Strategy, new top-line and bottom-line enhancements	Leadership
CFO	Capital management ROI, risks, and costs	Financial team efficiency	Budgeting, financials, business performance, and controls	Market and financial news and security concerns
CMO	Access new services fast and easy trial and error	Engagement and experience apps	Customer insights and transaction analysis competition	Customer engagement reputation collaboration
LOB	Business agility and speed	Integrated operations and production optimization	New markets and revenue growth competition	Product and account teams collaboration
CHRO	Cloud applications	Employee, mobility, engagement, and experience	Resources analysis and optimization	Motivation, alignment, learning, knowledge, collaboration, and privacy

Source: IDC, 2014

The marketing officer (CMO) making a 3rd Platform investment in social media has an entirely different perspective on what excellence and maturity mean for IT services in that area than a CFO might have for an IT investment in cloud services.

The ability of the CEO or senior IT manager to structure the level of IT support to the need of the buyer is just one other use that the maturity model can have in aligning a business' sense of urgency to adopt new technologies with the pragmatic questions of sourcing, process improvement, governance, and infrastructure that the maturity model raises.

Getting Beyond the Maturity Model

The decision to adopt the disciplines that are implied in a maturity model represents a significant investment for many enterprises — in people, skills, technology, process improvement, external resources, training, and, most of all, time. Assuming that business and IT leaders have agreed that the investment has value, what happens next? What are the steps that need to be taken? What kinds of resources are required to be successful?

IDC suggests that IT leaders undertake a rigorous assessment of current requirements of the business and their own ability to provide value. The assessment might include some of the following areas:

» Business expectations of IT

» 3rd Platform strategy (or lack of)

» Competitive benchmarks

» Governance and leadership relationships

» Budgetary plans and constraints

» Existing and planned infrastructure

» Service strategy

» Organizational culture and change readiness

» Sourcing, training, and consulting requirements

The stages of the analysis fall roughly along this path:

» Research 3rd Platform opportunities to improve business value.

» Identify the level of business urgency to adopt 3rd Platform solutions.

» Prioritize CXO investment in Big Data, cloud, social, and mobile.

» Assess the current 3rd Platform IT competencies.

» Develop a gap analysis between what is available and what is needed.

» Develop a transition strategy if needed.

» Continue to monitor 3rd Platform changes for future needs.

» Begin again.

To assist in the process, IDC has many resources, including:

» Platform-specific maturity models

» Expert resources

» Industry benchmarks

» Comprehensive surveys of IT executives

» Industry-leading 3rd Platform research

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Getting from here to there takes time, a tolerance for some risk, and a willingness to change. Using IDC MaturityScapes is a way to reduce the friction of change, to make more precise investments, and to identify the small details of governance, process, technology, organization, and other factors that can derail the best-laid 3rd Platform strategy.

IDC realizes that maturity models have historically been considered tools to improve internal processes like software application development. That is, in fact, the discipline for which maturity models were first designed over 20 years ago. Over time, they have been adapted to other, more general, management areas. The key difference in IDC's MaturityScape is that they are linked by design to the 3rd Platform. As such, IDC MaturityScapes cover a range of business strategic and value areas in addition to IT management. IDC believes that the

implementation of Big Data, for example, cannot simply be divided into separate business and IT segments.

Without recognizing IDC MaturityScapes' interconnection and the need to link them as conditions change, it's impossible for a CIO or IT manager to keep pace with 3rd Platform business investment strategies. This study, which is concerned with providing guidelines on how best to use the IDC MaturityScape, is equally focused on the tight correlation between business change and IT maturity. A key element of using this maturity framework is to continuously recalibrate the business need against IT maturity goals.

The maturity models themselves are aligned to five familiar stages — ad hoc, opportunistic, repeatable, managed, and optimized. Each stage has its own characteristics, different from the others, and the five stages represent a progression from the relatively uncoordinated and dysfunctional (i.e., ad hoc) management of IT to the aspirational excellence of optimized. It's important to note, however, that this year's optimization may not be state of the art next year. IDC believes that the use of a maturity model must also be calibrated to external changes, using benchmarks, expert resources, research, and so on — so that the maturity model itself is a window onto an ever-changing landscape of how best to use the 3rd Platform for business value.

Future Outlook

The influence of the 3rd Platform on IT strategy shows no signs of slowing down. In a recent survey of CIOs (see IDC's 2014 *CIO Agenda Survey*), IDC found that the two highest goals on CIOs' 2014 personal agenda were:

» Focus the IT organization more on business strategy than technology strategy (71%).

» Foster a culture within IT that drives more innovation (64%).

Coupled with a rapidly rising IT spend outside the IT budget, it's clear that CIOs are playing catch-up to a rate of business change that has no immediate precedent. CIOs who embrace innovative approaches to change are far more likely to succeed in keeping up the pace and staying current in competency and capability to business demand.

IDC MaturityScapes will continue to reflect the transition of 3rd Platform technologies in maturity and use. While IDC predicts that only 5% of enterprises will ever reach the optimized stage of maturity, there is more than enough work to do to maintain peer equivalency with the 70% of competitors and supply chain partners that are making sizable investments in business — enabling Big Data, cloud, mobile, and social solutions.

Essential Guidance

Where an enterprise is on a maturity scale will have everything to do with the size of the task ahead of it, as will its determination of where it wants to be. In terms of using IDC MaturityScapes as part of the calculation, however, there are a number of steps that can be taken immediately for little cost and time. The ramp-up to a greater reliance on these models, along with experience in using them, depends on and is a derivative of the initial analysis.

IDC recommends that IT leaders who wish to explore using these maturity models do the following:

Near Term (0-6 months):

» Familiarize key staff with the structure, purpose, and use of IDC MaturityScapes.

» Identify key areas of business investment in 3rd Platform IT.

» Begin the assessment of business requirements of IT services with an analysis of IT's ability to meet them.

» Identify one or more key IT competencies or platforms that can benefit from an investment in achieving greater maturity (focusing on business benefits, risks, SLAs, costs, resource requirements, governance, process, and organization).

» Create a pilot project to improve a specific 3rd Platform IT capability. Start small.

Medium Term (12-18 months):

» Use maturity models to identify the dimensions of improvement needed on an enterprise basis — across IT and business areas — including the metrics, process goals, organizational roles, and infrastructure needed to succeed.

» Create a cross-business-IT team to staff a 3rd Platform resource center that has the expertise and experience to train a broader cross-section of the enterprise in coordinated change and maturity development.

» Establish a process of communication and documentation that updates existing maturity models across all of the areas for which they're used on an annual basis — using IDC benchmarks, survey data, and expert resources.

Longer Term (18-36 months):

» Document a set of enterprise processes, including key metrics, that deliver IT 3rd Platform services to the business at the highest funded level.

» Establish enterprise-level governance and process standards to support repeatable initiatives in 3rd Platform improvements in maturity.

» Ensure your employee rewards and recognition systems are reinforcing the specific improvement culture you want, and propose changes to them if they are not.

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