



Reducing IT Complexity to Accelerate Digital Business

Equipped with a structured, well-governed strategy, CIOs can simplify and refine their company's IT landscape, control costs and reap more benefits from doing business in the digital age.

Executive Summary

Complexity is part and parcel of today's IT landscapes – creating significant impediments to business growth and flexibility. As companies become more IT-intensive, there is a pressing need to overcome technology-related challenges and unlock the potential of digital business.

In our view, a sound, digitally-focused IT organization is one that:

- Possesses a well-managed infrastructure and applications.
- Is directed by a detailed blueprint that informs continuous improvement.
- Utilizes a lean organizational structure and nimble processes that allow the business to be proactive and responsive – ready to turn on a dime as business needs evolve and change.
- Articulates value with best-in-class services and measurable outcomes.

These capabilities begin with an integrated approach that addresses the complexity surrounding digital business transformation, supported by methods and frameworks that help

identify, simplify and prioritize the steps involved in such an initiative.

While IT simplification efforts can deliver significant benefits in terms of cost, efficiency and quality, a truly successful one will also render the IT organization fit and primed to thrive in today's digital world.

This white paper articulates a three-stage approach that IT organizations can take to strengthen and streamline their capabilities and deliver on the promise of digital business.

Typical CIO Challenges

IT complexity can result from any or all of the following:

- **Unstructured, widely scattered applications** comprising legacy, obsolete and current technologies, all modified concurrently, and all contributing to burgeoning maintenance costs. At many companies, uncontrolled buying patterns are also to blame for redundancy across the applications portfolio.
- **Decentralized, expensive technology architectures** characterized by mismatched



business processes, rigid management layers and an overly complex operating model consume time and increase overhead.

- **Enterprise architecture rules and governance standards** that are ignored or overlooked at nearly every turn. Currently, most IT organizations do not have a well-regulated, homogenous blueprint for accommodating growth.
- **Legacy and duplicate operating environments, networks and data centers** that are unwieldy, inflexible and difficult to manage – stalling and undermining organizational change and agility, and sapping companies’ ability to deepen their insight and make analytical decisions.
- **Operational challenges** exacerbated by mergers and acquisitions, poor IT governance and business imperatives that override architectural considerations.

Reducing Complexity

IDC reinforces the above – defining IT complexity as “the state of an IT infrastructure that leads to wasted effort, time, or expense.”¹ In its view, complexities can be caused by various factors, including “a heterogeneous environment, use of previous-generation or legacy technologies, server or application ‘sprawl,’ insufficient management tools and automation, non-centralized IT ‘pockets’ scattered around different portions

of the broader organization, or other symptoms that would lead to wasted time and effort.”²

Complexity breeds complexity, which in today’s IT-intense world is spiraling into a set of “quick fixes” applied superficially without addressing deeper causes. Incremental remedies and making application and infrastructure changes without considering the architectural “glue” can sabotage IT simplification and be prohibitively expensive and hard to manage.

Incremental fixes and the deployment of application and infrastructure changes without due consideration to the architectural “glue” can be prohibitively expensive and hard to manage.

As new digital technologies embodied by the SMAC Stack™ (social, mobile, analytics and cloud) become central to most business strategies, addressing and resolving the challenges associated with IT complexity has become a critical imperative – requiring businesses to fundamentally rewire and simplify their IT estate. (Figure 1 illustrates the requirements for doing so.)

These components are key to creating a nimble and “digitally fit” IT organization. At the same time, attaining this level of operational simplification requires an integrated and cohesive strategy. IT complexity is a multi-dimensional problem that cannot be addressed with isolated initiatives. For

An Integrated Approach to Reducing IT Complexity

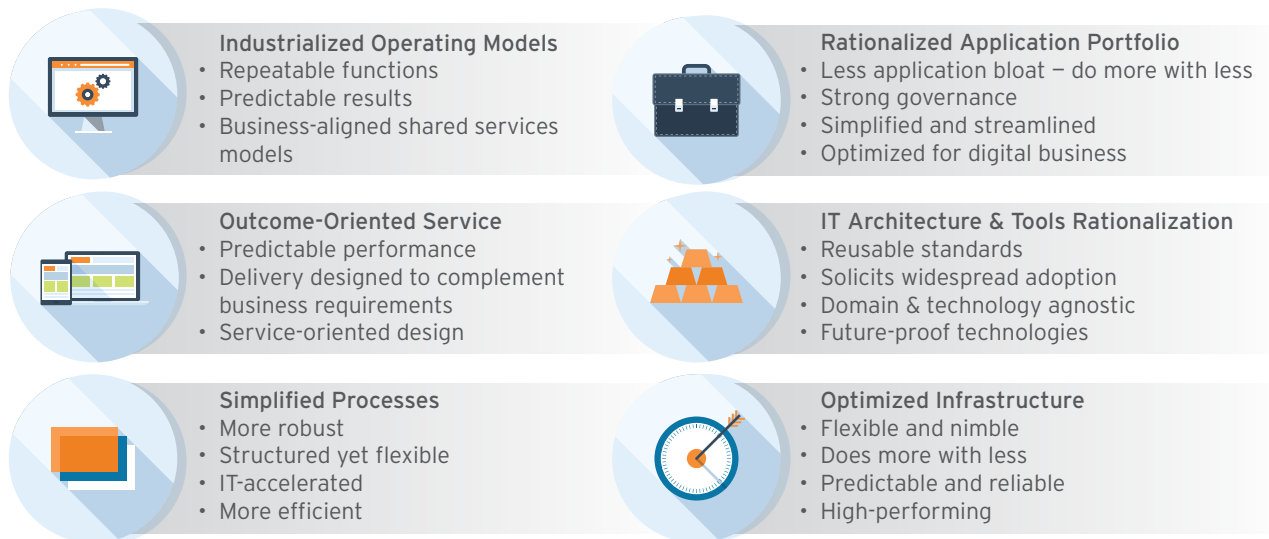


Figure 1

Cognizant SimpliFIT: A Framework for IT Simplification

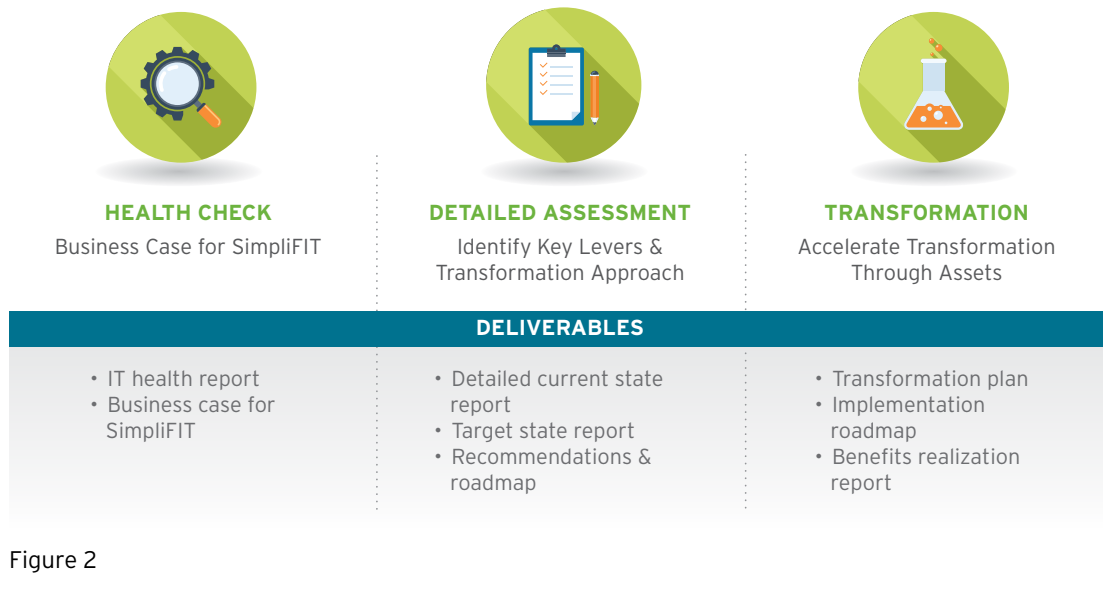


Figure 2

instance:

- Decisions around architectures and tools must be made hand-in-hand with infrastructure and application choices.
- Investments in legacy modernization should be considered alongside new digital capabilities and partnering decisions.
- Processes, operating models and transparent IT governance work best when they interlock – enabling a company to create a work environment that is easier to manage, more responsive, and more innovative.

By adhering to these principles, companies can create and articulate a set of services and business-oriented outcomes centered on delivering true business value across the organization.

According to recent Gartner research, “Shifting to lean IT techniques is the only way for IT departments to keep up with the rapid change in business needs. The combination of the digital revolution and the nexus of forces (social media, mobility, cloud computing and information patterns) will make it impossible to survive without some lean IT capability.”³

To help IT organizations accomplish this goal, we have developed Cognizant SimpliFIT™, a framework that aims to address enterprise IT complexities by applying elements of the approach illustrated in Figure 1. SimpliFIT encompasses three phases:

- Health check.
- Detailed assessment.
- Transformation.

By following these steps (see Figure 2 above), IT organizations can reduce complexity, become more nimble, and build a solid foundation for conducting and sustaining digital business.

Step 1: Health Check

Although IT complexity remains an abstract term, most CIOs see eye-to-eye when it comes to simplifying the IT infrastructure. The first step is to build a concrete business case for doing so. This enables companies to:

- Understand areas of the business that reveal the underlying causes of complexity.
- Gain an initial view of where the complexities exist.
- Carve out priorities and specific focus areas for deeper assessments.
- Generate a baseline for current IT performance.
- Develop an initial model for gauging return on investment (ROI) and cost/benefit.
- Create a detailed assessment plan.

The health check involves initial, time-boxed data-gathering and diagnostics to produce a high-level health report and business case that enable companies to prepare a tailored assessment plan. The health check is also key to validating (or invalidating)

dating) assumptions regarding complexities and gaining buy-in across the IT organization.

Step 2: Detailed Assessment

A detailed assessment provides deep insight into the six focus areas, or a subset of those, as determined by the health check. Figure 3 below highlights the key areas that our framework addresses.

The assessment offers CIOs and their organization a set of recommendations, tools and timelines for addressing and resolving the challenges around IT complexity. This enables them to:

- Gain a clearer view of existing IT complexities across all six focus areas.
- Apply specific recommendations for reducing complexity through decommissioning, rationalization and overall simplification of the IT infrastructure.

- Understand the potential benefits (lower costs, higher efficiencies, increased responsiveness and improved quality).
- Utilize a transformation roadmap and implementation plan.
- Employ transformation levers to address recommendations.
- Benefit from tangible, realistic costs and timelines for the transformation program.

Armed with this information, CIOs and other key IT leaders can make more informed decisions regarding the operational and technological restructuring that powers a successful IT transformation program.

Step 3: Transformation

An IT simplification program of this scale addresses multiple dimensions. In essence, it is an organizational transformation, which requires

SimpliFIT Focus Areas

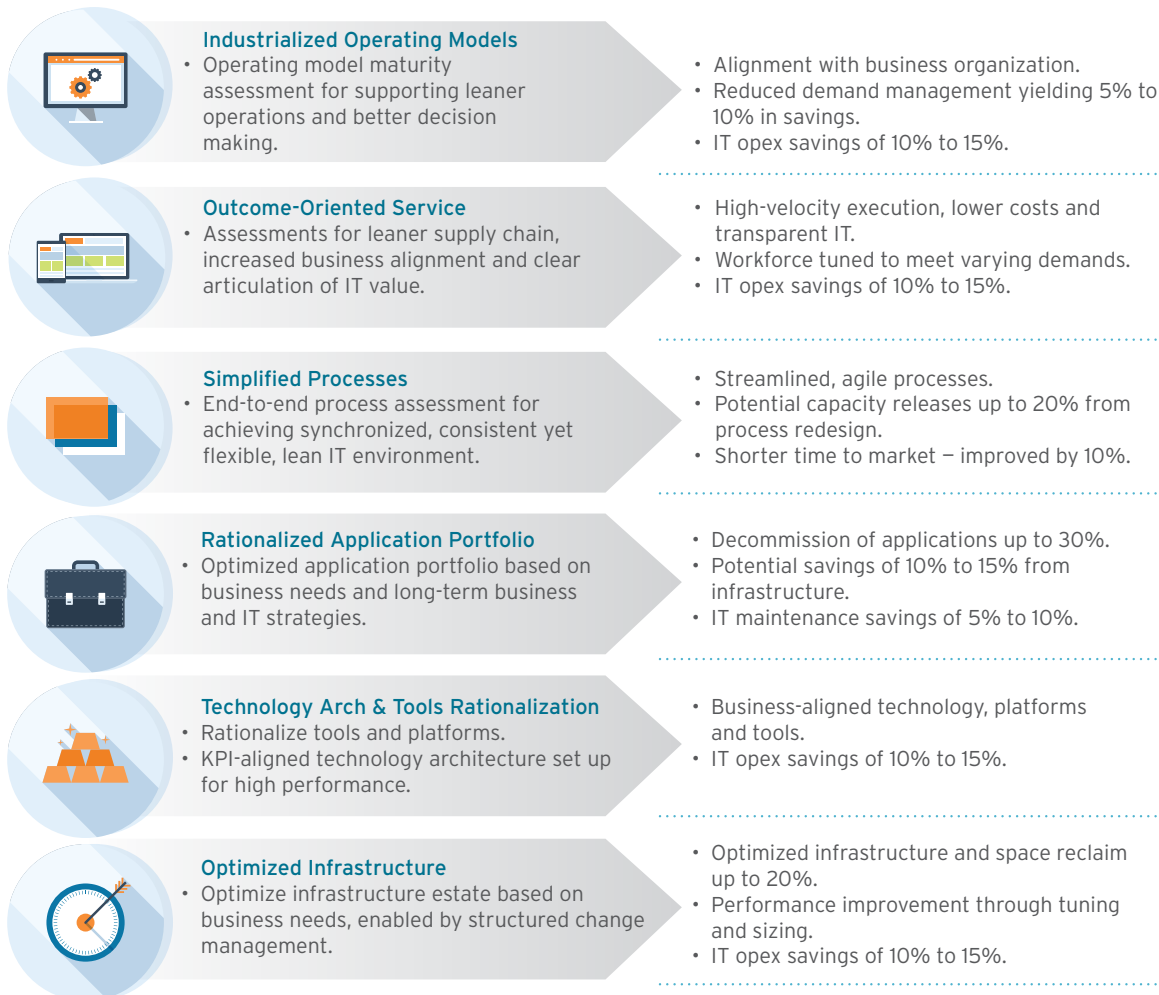


Figure 3

proper sequencing – from design and build, to implementation, rollout and adoption. All stages must be managed by an overarching governance and benefit-realization framework that incorporates:

- **Design:** Identifying the actions that must be taken to simplify the IT landscape. Typically, these consist of four broad areas:
 - Rationalizing and reengineering:
 - » Application rationalization and infrastructure decommissioning.
 - Standardization:
 - » Technology blueprinting, process harmonization, outcome modeling and industrialization levers.
 - Automation and tooling:
 - » Areas where standard operating procedures can be automated or easily imple-

mented via a COTs product, which can simplify operations.

- Optimization:
 - » The application of lean methodologies, application tuning, demand management and other optimization techniques that help reduce complexity and bloat.

- **Develop capability/implementation/rollout/adoption:** This is where the rubber meets the road, and where value is generated. Once a set of steps/levers have been identified, we recommend an agile model for implementation, rollout and adoption that takes into account dependencies, priorities, the scale of benefits and the organization's appetite for change. Pilots are recommended to prove concepts, provide confidence to stakeholders, incorporate lessons learned and scale quickly. Each step of the implementation should utilize a



Quick Take

Portfolio Simplification and Application Rightsizing for a Major Life Insurance Company

A U.S.-based life insurance company, with over \$6.5 billion in global revenues and serving 100 million customers in 50 countries, faced a number of obstacles when attempting to rationalize and simplify its applications portfolio. Working with us, the insurer optimized its key business applications to reduce costs and speed time to value.

Challenges:

- Complex legacy systems that exacted a high price in terms of maintenance and cost of ownership.
- Application data models that had grown over time due to architecture complexities and technology.
- Application interfaces that conflicted with numerous other applications.

Solution:

We employed our SimpliFIT framework to:

- Determine the technological and business value of an application and its significance in the portfolio.
- Confirm applications' functional and operational maturity.

- Rationalize applications and simplify the overall application portfolio.
- Identify additional opportunities for optimization and transformation.

Benefits:

- A simplified and optimized portfolio that vastly improved business value and generated a 20% increase in cost savings.
- Application stability increased by 20%.
- Time to market improved by 17% for any application change/enhancement.
- A much improved and mature application set with a roadmap for enhancing the systems' lifespan and continually increasing business value.

well-defined approach, including estimates, status reporting and metrics that dovetail with the larger transformation program.

- **Transformation governance:** Central to a successful IT simplification program is widespread adoption, sensitive change management and benefit realization – each of which depends on well-managed, effective governance. The CIO's office should ensure:
 - A change strategy and leadership that afford a clear vision and sponsorship of the simplification program.
 - Proper stakeholder management involving the identification of change agents and a clear-cut communication strategy to drive faster adoption.
- Training in all areas that are impacted (either due to organizational redesign, the introduction of new technology, or rationalization of redundant/legacy systems).
- Tracking of investments and benefits to help control costs, heighten productivity and assure quality.

Each step of the implementation should utilize a well-defined approach, including estimates, status reporting and metrics that dovetail with the larger transformation program.

Looking Forward

For organizations looking to reduce IT complexity and simplify their infrastructure, we recommend the following:

- **Take stock and understand the size of the prize.** A rapid but thorough health check is the best way to understand and obtain a clear picture of where complexities lie.
 - Gather information about the application/infrastructure portfolio and potential scope of rationalization.
 - Collect existing data and metrics that provide insight regarding the impact of existing complexities (e.g., IT debt; infrastructure performance; user experiences; SLAs; application demographics; partner performance; process maturity).
- **Correlate complexity challenges with growth impediments** to identify top priorities and target focus areas that require immediate attention.
- **Identify key stakeholders** to drive and support the simplification program.
- **Commission a detailed assessment** that includes a current state report, target outline, simplification roadmap and transformation charter.

IT complexity is an ongoing issue for CIOs. Yet doing business in the digital world is all about simplicity, speed and responsiveness. By systematically addressing the challenges associated with this issue, CIOs can help their organization fulfill the promise of digital business.

Footnotes

- ¹ Randy Perry, "Study Results: IDC Index Calculates Cost of Complex IT," *ForbesBrandVoice*, August 6, 2014. <http://www.forbes.com/sites/oracle/2014/08/06/study-results-idc-index-calculates-cost-of-complex-it/>.
- ² Ibid.
- ³ Nathan Wilson, "Maverick Research: Fire Two-Thirds of Your IT Organization," Gartner Inc., September 25, 2014. <https://www.gartner.com/doc/2856019/maverick-research-twothirds-it-organization>.

About the Author

Karthik Padmanabhan is Cognizant's Offshore Leader for process and quality consulting (PQC) and application value management (AVM) consulting practices. He is a process improvement consulting expert with 18-plus years of experience leading large-scale process transformation initiatives. Karthik has worked with several global clients on a variety of process models, life cycles, platforms and industry domains, and has led large process initiatives and directed implementation of high-maturity processes that were instrumental in improving product quality, reducing cycle time, mitigating risks and increasing productivity. He has proven experience in consulting to facilitate the adoption of best-practices models such as CMMI, eSCM and ITIL in several IT organizations. He has an undergraduate degree in electrical and electronics engineering from Annamalai University, and an M.S. in quality management from BITS Pilani. He can be reached at Karthik.Padmanabhan@cognizant.com.

About Cognizant

Cognizant (NASDAQ: CTSH) is a leading provider of information technology, consulting, and business process outsourcing services, dedicated to helping the world's leading companies build stronger businesses. Headquartered in Teaneck, New Jersey (U.S.), Cognizant combines a passion for client satisfaction, technology innovation, deep industry and business process expertise, and a global, collaborative workforce that embodies the future of work. With over 100 development and delivery centers worldwide and approximately 218,000 employees as of June 30, 2015, Cognizant is a member of the NASDAQ-100, the S&P 500, the Forbes Global 2000, and the Fortune 500 and is ranked among the top performing and fastest growing companies in the world. Visit us online at www.cognizant.com or follow us on [Twitter: Cognizant](#).



Cognizant

World Headquarters

500 Frank W. Burr Blvd.
Teaneck, NJ 07666 USA
Phone: +1 201 801 0233
Fax: +1 201 801 0243
Toll Free: +1 888 937 3277
Email: inquiry@cognizant.com

European Headquarters

1 Kingdom Street
Paddington Central
London W2 6BD
Phone: +44 (0) 20 7297 7600
Fax: +44 (0) 20 7121 0102
Email: infouk@cognizant.com

India Operations Headquarters

#5/535, Old Mahabalipuram Road
Okkiyam Pettai, Thoraipakkam
Chennai, 600 096 India
Phone: +91 (0) 44 4209 6000
Fax: +91 (0) 44 4209 6060
Email: inquiryindia@cognizant.com