

# **DIGITAL TRANSFORMATION**

**Dead bugs, The Talking Heads and  
corporate innovation**

A Caldwell Whitepaper

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# DIGITAL TRANSFORMATION

## Dead bugs, the Talking Heads and corporate innovation

By Shawn Banerji

### ABOUT THE AUTHOR

Shawn Banerji is the managing partner for the Technology, Digital and Data Leaders Practice at Caldwell. As a trusted advisor to organizations seeking cultural and commercial transformation by unlocking the latent value of legacy assets and product portfolios, he advises clients on the convergence of talent and innovation across all facets of the evolving digital enterprise.

Shawn Banerji  
+1 203 348 9592  
Stamford  
sbanerji@caldwellpartners.com

## The millennium bug is widely considered the most significant technology non-event of the past 20 years, yet few are aware of its longer-term implications for in-house software engineering and innovation...

### THE PERFECT STORM

In the months and years leading to 2000, fear of Y2K-related systems failures and the shortage of coders who could perform the remediation opened the doors for third-party software houses to get a foothold in corporate America, and catapulted the fortunes of companies such as Tata Consultancy Services and Wipro. It also coincided with the aggressive marketing of workflow and database tools by Microsoft and Oracle, as well as the rise in popularity of third-party ERP systems such as SAP.

These forces combined to create the perfect storm for the buy vs. build revolution, whose soundtrack, “you know your business, we know technology, focus on your expertise and leverage ours,” resonated particularly well with CIOs who were simultaneously being told to manage costs and that their functional domain was a commodity.

Not surprisingly, the pressure from finance and the inability of many CIOs to make a strong business case for maintaining in-house development led to many companies shedding in-house software engineering and the intellectual property (IP) that it represented. This was, in effect, a time bomb that would detonate a decade and a half later and contribute to the stymying of corporate innovation as it related to the software engineering skills critical for successful corporate digital transformation. “Many legacy businesses outsourced too aggressively and with that surge, a lot of essential talent went out the doors,” said Vince Campisi, SVP, digital and chief information officer at UTC. “Because of this, there are now critical skills to drive innovation and speed to market that we don’t have on staff. We’ve been renting these skills for too long.”

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### BUY VS. BUILD

2000 represented a time when the majority of software development was still done in house. In fact, the Fortune 50 employed more programmers combined than the 10 largest software companies in the world. The leaders of the Fortune 1000 invariably spoke of focusing on their core businesses and associated subject matter expertise—banks were banks, consumer packaged goods made and sold products, and hospitals treated sick people. Many technology companies—PC leader Dell included—were structured like manufacturing operating models and proud of it.

The belief that technology was a non-core asset pervaded and increasing reliance on third parties blossomed. Buy vs. build was the mantra, and why not? Banks needed to focus on interest rates, not on software architecture. Software companies

and service providers alike touted an enigmatic but compelling message of secret sauce done cheaper and faster. This was a siren’s song for CIOs negotiating budgets with their finance counterparts, who—in the organizational hierarchy of the early millennium—were often their direct superiors.

CIOs and their functional teams adapted to this hybridized world of IT—they became uber program managers, beefed up their commercial orientation and process skills, worked to become genuine partners to their business counterparts and, over time, made peace with their finance brethren. They also became expert negotiators, identifying those best-of-breed solutions that could be integrated into their operating models to support the operating needs and continuity of the enterprise.

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## GIVING AWAY THE KEYS TO THE KINGDOM

Despite the momentum of outsourcing and hybridization, however, there was ample evidence that bespoke software and technology platforms, albeit clunky and expensive at times, were essential components of the successful enterprise. More sophisticated companies recognized the value of these assets and, in some cases, even sought to monetize them through a strategy of commercialization. This led to the creation of Polaris (COSL/Citi Offshore Ltd), Genpact (GE), and Cognizant (D&B), among others.

Other institutions lucked out by virtue of their limitations. "Higher education couldn't afford to outsource or leverage vendors to the same extent as the public sector," said Gaspare Loduca, vice president and CIO at Columbia University. "This was a blessing in disguise as academia still builds and runs much of its own IT, and correspondingly has been able to maintain the critical IP."

This is not to say that there was no merit in leveraging vendors or outsourcing partners, but Y2K was the non-event that finance and vendors needed to paint corporate IT as a commodity and spur the shift for the Fortune 1000 to increasingly rely on third parties for software engineering.

Companies that recognized the value of their IP assets in IT also availed themselves of the trend to buy and ultimately lease software, infrastructure and storage as it was appropriate, but they continued to invest in software engineering and the commercial value it represented. Across industries, these companies have consistently outperformed their peers with recent examples as varied as Goldman Sachs, GE and Domino's Pizza.

As the CIO's reporting dynamic shifted from the CFO to reporting directly to the CEO, IT's value has become more evident and CIOs are increasingly gaining strategic relevance and product accountability. The CIO as technical visionary—not just process leader—has emerged, and in many organizations the CIO title has become a holding place as new designations like chief digital officer and a revived version of chief technology officer have come back into vogue. A new center of gravity with the marketing function has also come into play, as CIOs have taken accountability for the data and analytics resources that contributed to customer insight and experience.

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The role of the CIO as innovator and owner of digital disruption is evident in the era of digital transformation. Many find themselves in a quandary, though—they now have the right access and mandate, but lack the in-house resources to effectively execute digital transformation. More often than not, their staff represents the implement, integrate and manage skill set versus the agile skill set required to rapidly iterate and transform. The majority of these development competencies—skills that were once honed in-house now reside with vendors.

"By not organically growing talent, it makes it difficult for the ideation that drives innovation to permeate an organization," said Nick Rockwell, chief technology officer of The New York Times. "By marginalizing or forgoing an investment in internal engineering talent, you lose the ability to control your own destiny. Talent really is the keys to the kingdom."

**"WE ARE A TECHNOLOGY FIRM,  
WE ARE A PLATFORM."**

**Lloyd Blankfein Chairman & CEO,  
Goldman Sachs Bloomberg Television  
(June 2014)**

As we explored in our recent paper, "The Digital Multiplier," digital transformation represents the single most compelling opportunity for legacy businesses to compete with rapidly emerging disruptors and increase their market valuation. Companies that have pivoted—either organically or through M&A—are generating outsized valuations and market capitalization consistent with those of leading technology companies. Legacy companies that can embrace digital transformation will quickly separate themselves from competitors.

## THE BALANCED APPROACH

How are these CIOs going to innovate quickly and in a cost-effective manner, and are they beholden to their vendors? Software engineering is a competency akin to a muscle; without use or enhancement through exercise, it will inevitably atrophy. This affliction—one that is all too common across the corporate landscape—plays a direct role in the inability of these organizations to organically drive digital transformation or innovate at a pace that allows them to compete with disruptive market forces. Despite the prevalence and sophistication of micro platforms that allow for the fast ramp-up of virtual capabilities without expansive in-house resources, core software engineering and the IP that it represents is a key driver of corporate innovation.

Functional IT leaders are now challenged to not only run the operations that support

the business, but fundamentally change the business—the proverbial swapping of the car tires at 65 mph.

The journey is not simple. The organizations and corporate leaders who have been the most successful possess the humility and vision to see a future beyond the value of their legacy operations and have identified ways to introduce innovation back into their corporate environments.

Additionally, many legacy corporations are increasingly structuring their organizations to reflect a model closer to those of the less-hierarchical organizational design of software companies. This is not a linear strategy but a complex undertaking that includes a commitment to the right in-house assets, vendor partners, and strategic investing either directly or via the venture community.

“It can be a challenge for large companies to be nimble and foster organic innovation,” said John Geyer, SVP, chief innovation officer at MetLife. His firm is partnering with venture firms that are investing in disruption and innovation. “Financial returns aside, this gives us insight into leading-edge, early-stage and growth innovation.”

Some companies are taking an even bolder approach—in February of 2016, JetBlue launched JetBlue Technology Ventures (JBV) with a \$150 million investment. “The pace of change is happening so fast that it’s almost impossible to keep up by leveraging only internal resources,” said Eash Sundaram, CIO and chief innovation officer at JetBlue. “One of the reasons that we created JBV was that it allowed us to tap into an external ecosystem of talent, ideation and innovation. By investing not only our capital but also our brand into adjacent spaces, we believe that we can drive a higher valuation for the asset.”

“Done right,” Campisi added, “digital is not just about defense—it allows us to play

offense; it’s not just saving money, it’s making money.”

By taking a balanced approach, transformational leaders are creating templates for innovation that are executable and lead to the desired commercial, operational, organizational and culture outcomes. Speaking about digital innovation in the healthcare field, Beth O’Rorke, chief information officer and SVP of operations at Blue Cross Blue Shield Massachusetts said “Members are unique; we need to understand where each one wants to go and help them get there. Putting them first can be a high-touch journey so it’s important that we own that experience.”

In order to take the first step on this journey, it is essential that organizations have the right digital skill portfolio in place because without them, as the Talking Heads song goes, “We’re on the road to nowhere.”

Operational & process Leader	Digital & Transformational Leader
<ul style="list-style-type: none"> <li>GM of the functional utility. Leads technology strategy, business relationships, budgeting and the fusion of tech and business process.</li> <li>Focus on applications, infrastructure and IT operations that support core business operations and the broader business agenda. Technical competencies reflect an “implement, integrate and manage” skill portfolio.</li> <li>Partner with divisional leaders and functional peers in order to ensure business alignment. Well-developed intrapersonal, presentation and communication skills.</li> <li>Uber program manager able to drive multiple concurrent projects to successful resolution on time, on budget and according to specification.</li> </ul>	<ul style="list-style-type: none"> <li>Visionary whose orientation is toward innovation, problem solving and value creation. Master of change management across people, process and technology.</li> <li>Leverages new technologies and concepts in order to create business models that can stimulate change. Data orientation enhances customer experience and insight.</li> <li>Deliver solutions to drive the company’s broader objectives via Agile approach and software engineering/platform resources. Cybersecurity is central to business agenda.</li> <li>“Ambassador” for the brand who plays a prominent role in market reputation as it pertains to commercial outcomes and as a catalyst for attracting talent.</li> </ul>

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John Geyer, SVP, chief innovation officer at MetLife



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