



DATAMONITOR WHITE PAPER

Breaking the Vicious Circle: Business Dynamics and Application Platforms

Exploiting application maintenance opportunities to deliver innovation

A whitepaper by Datamonitor and EDS, a Hewlett-Packard company

Publication Date: November 2008

SUMMARY

Europe is an increasingly dynamic business environment. IT decision makers strive to keep pace by adding new functionality to their application environments, yet most fail to adequately plan for the integration and impact of new features on their existing application platforms. This creates a vicious cycle of new functionality leading to an overwhelming volume of application maintenance. In turn, this cripples an IT department's capability to respond swiftly to new business dynamics.

In this paper, Datamonitor outlines a starkly different approach: a virtuous cycle of "adaptive innovation" based on an agile application platform that exploits the opportunity cost of maintenance. It enables IT departments to readily innovate and absorb change by providing a flexible platform to build, update, and trial new applications. It is a low-risk and pragmatic approach, because innovation occurs within a proven platform and may take place gradually, one application at a time.

Not only does an agile application platform reduce maintenance, it also lowers the cost of delivering new application functionality. By moving resources away from maintenance, IT decision makers could garner a return on their investment and align IT more closely with broader business goals.

The findings in this paper are based on a survey of more than 270 IT decision makers in the UK, Scandinavia, the Netherlands and Germany, which showed:

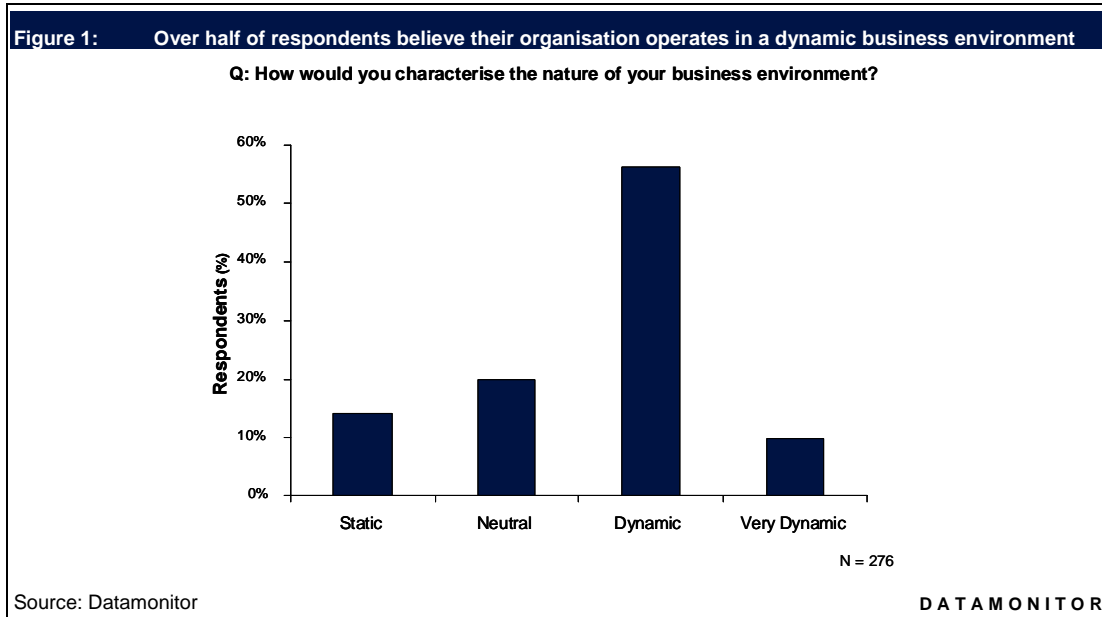
- There is a gap between the strategic goals of IT and the reality of application environments, which are failing to keep pace with business change.
- Strategic and inventive use of IT is not driving business innovation as frequently as it could, because of a self-perpetuating pattern that is fuelled by:
 - pressure on IT departments to continue providing new functionality at an increasing pace;
 - an inadequate approach to application planning;
 - almost half of IT resources being locked into basic maintenance tasks.
- This vicious cycle can be transformed into a virtuous cycle by:
 - reducing maintenance by a third, which would markedly change IT and business dynamics;
 - reducing development risk by implementing an agile application platform;
 - adopting adaptive innovation, which is a low-risk, pragmatic and incremental approach;
 - considering application maintenance as the cornerstone of a dynamic IT infrastructure.

Effective IT innovation is within reach and does not require a major operational or IT overhaul. Enterprises can yield tangible business results by adopting a flexible application platform that enables adaptive innovation; reducing IT maintenance while simultaneously increasing business agility. This paper should be used by IT decision makers as a blueprint for not just keeping pace but staying one step ahead in today's challenging business environment.

INTRODUCTION

IT decision makers recognise the dynamism of business environments

European business environments are continuously changing, according to the majority of IT decision makers. The factors influencing this dynamism vary in different industries and businesses, although all are affected by broader macroeconomic and local conditions. Even respondents in the government sector, which has historically changed at a less rapid pace than the private sector, believe they operate in a dynamic business environment.



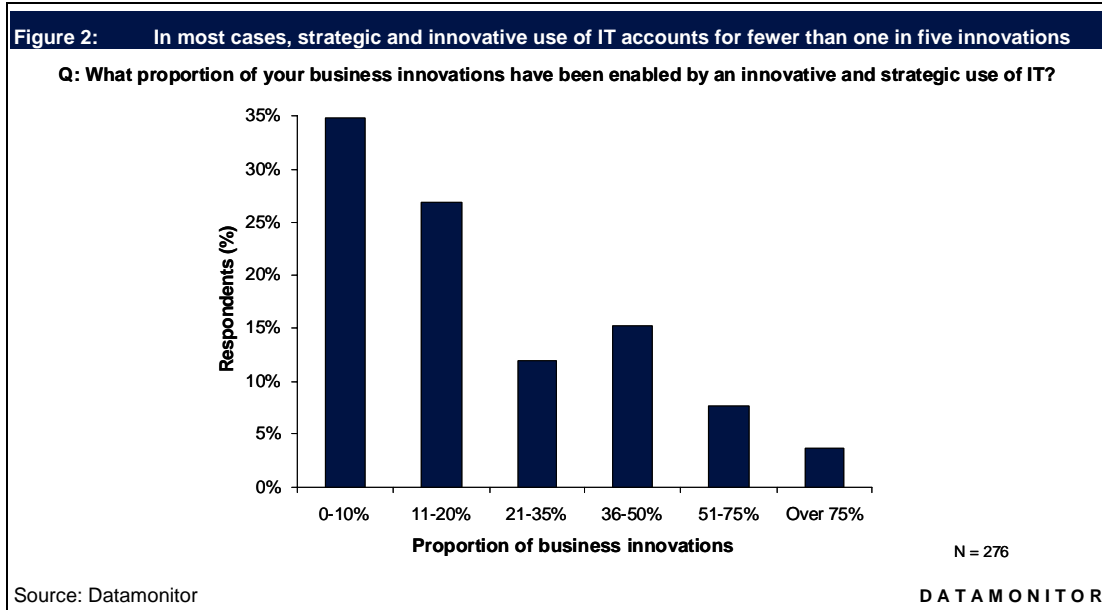
IT is not contributing to the business as much as it could

A dynamic business environment demands a high level of IT responsiveness, particularly in an increasingly competitive marketplace. However, most IT decision makers do not believe that the power of IT to contribute to the business is being harnessed.

Strategic and innovative use of IT is accounting for a relatively low proportion of all business innovation

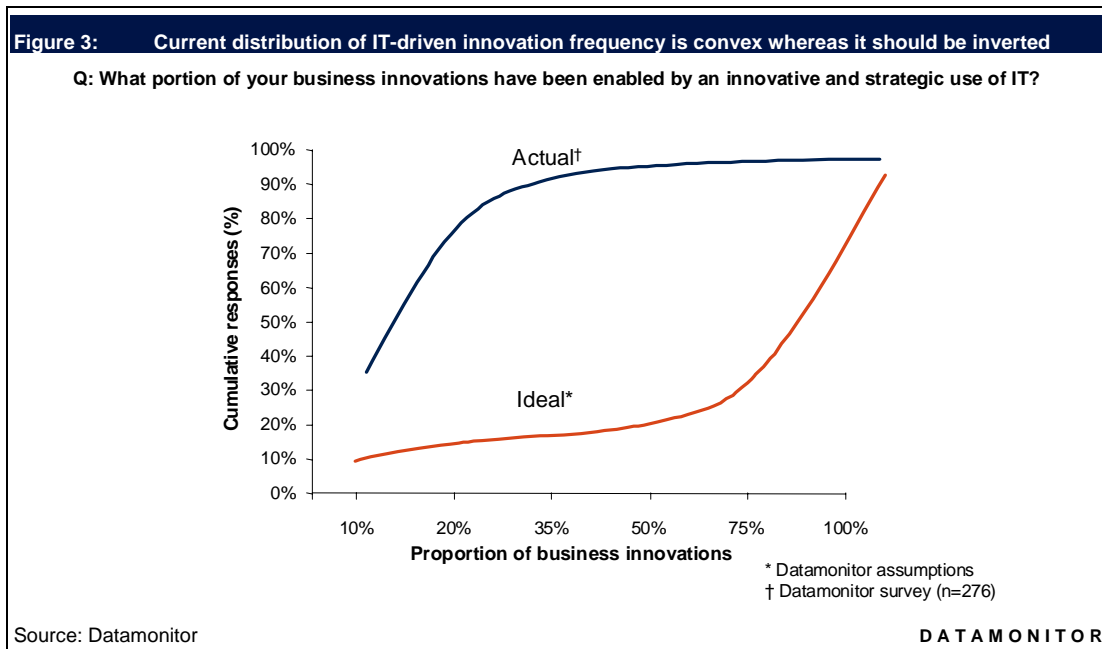
IT is not a major driver of business innovation, according to IT decision makers. More than half of the respondents recognise that strategic and innovative use of IT accounts for fewer than one in five business innovations. IT is either thought of as a commodity, or is institutionally prevented from contributing to business.

The majority of IT decision makers find that most IT projects are not novel and that IT rarely drives transformative innovation. However, the notion of transformative innovation is particularly appealing to IT departments because they are under escalating pressure to create new functionality, in order to adapt to changing business environments. Some IT providers exploit this phenomenon by touting their IT solutions as being revolutionary in transfiguring the landscape of business operations. As Figure 2 shows, the reality is that true transformative innovation is elusive in the majority of real-world IT scenarios.



The ideal distribution curve of IT-driven innovation should be concave, not convex

The experience of IT decision makers is that there are very few instances of IT-driven innovation actually being achieved today. This creates a convex distribution pattern for the frequency of IT-driven innovation when, ideally, the opposite should be true.

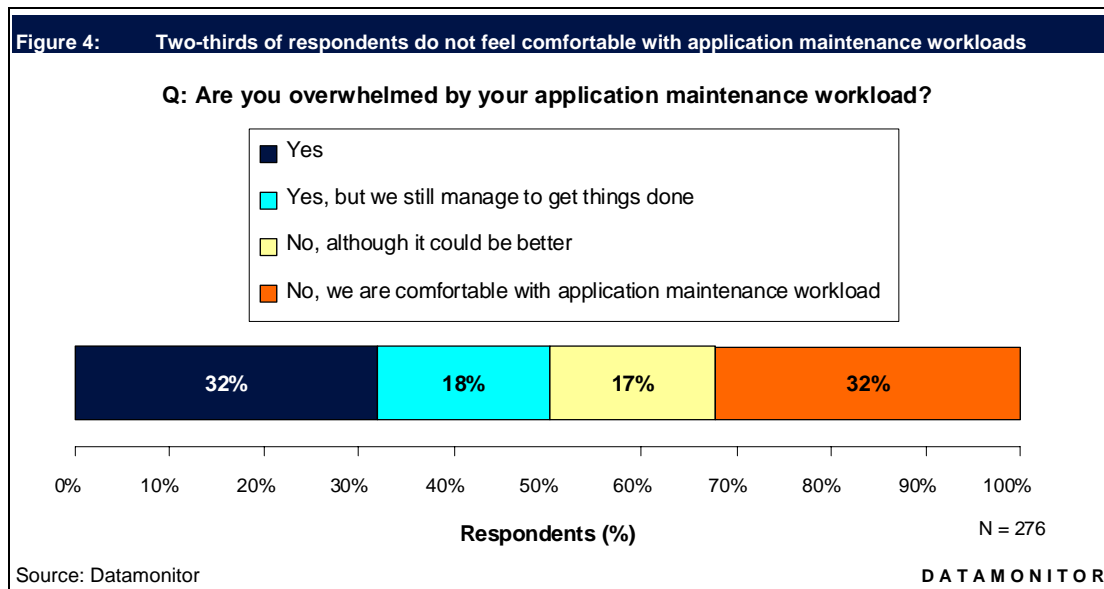


Given that most business processes feature an element of IT, this frequency pattern should be inverted. Datamonitor estimates that IT is integrated in at least two-thirds of all current business processes and should, therefore, contribute to or be involved in at least 75% of instances of business innovation. There is clearly a disconnect between IT's potential to contribute to innovation and the reality of IT operations today.

Why is IT failing to contribute to the business?

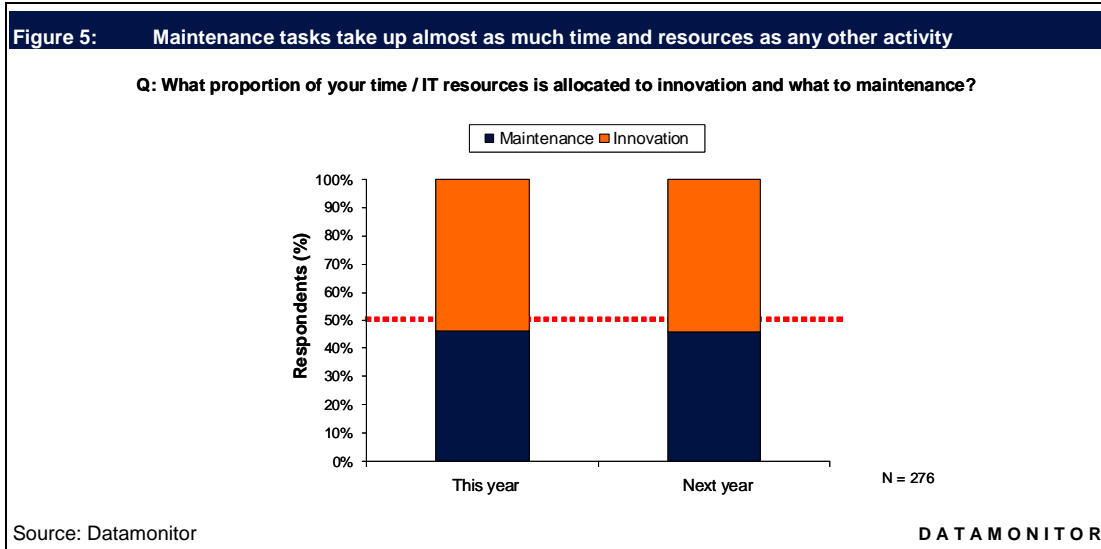
IT decision makers feel overwhelmed by the volume of maintenance tasks

A major cause of IT's failure to contribute to the business is that maintenance workloads are overwhelming IT decision makers and their departments. More than two-thirds of respondents acknowledge some issue with their current application maintenance workload and think the balance of their workload could be improved. One-third report that they are completely overwhelmed.



IT departments are spending almost half of their resources on maintaining the status quo

Most IT decision makers are justified in feeling inundated by their application maintenance workload. Datamonitor research shows that maintenance accounts for slightly less than half of a typical IT department's resources. Innovation, according to respondents, includes automation of tasks or business processes, consolidation or integration of applications, implementation of online services and functionality, improving customer or supplier relationships, and enabling wireless or remote work.



The bulk of maintenance time is spent installing security updates, patching application bugs, administering user accounts, and processing requests. A parsing of responses shows that larger enterprises spend the most time on maintenance, most probably because their highly complex IT infrastructures require greater levels of upkeep. Datamonitor research also shows that larger enterprises are the least satisfied with their current implementation of applications.

A reduction of maintenance workload by a third would markedly change IT/business dynamics

IT decision makers are not simply overwhelmed with application maintenance, they also believe that time spent on maintenance diverts resources away from business innovation and agility. For example, due to time spent on maintenance, they have less time to implement new applications and business processes, and to adequately integrate them with existing infrastructure. They are also unable to respond effectively to the IT requirements brought about by business changes, such as internal restructuring, new business partnerships, a spike in network or application demand, or a company acquisition. Currently, the majority of IT decision makers do not believe they have the resources to accommodate these types of changes adequately.

Based on our research, Datamonitor estimates that if application maintenance workloads were reduced by one-third, IT decision makers would be able to keep pace with business dynamics. This would not only free up resources for new functionality, it would also enable decision makers to formulate strategies on how to align IT with changing business processes and objectives.

IT decision makers identify new functionality and alignment to business as key objectives

Aligning IT with overall business goals is the most important objective of IT decision makers' current IT investment strategy, albeit by a narrow margin, according to information from Datamonitor's annual Technology Trends study. This research is based on a survey of the attitudes and technology buying behaviours of more than 415 senior IT decision makers working

in large enterprises in financial services, the public sector or manufacturing in the UK, Scandinavia, the Netherlands and Germany.

Table 1: Please rate the importance of the following objectives to your IT investment strategy this year	
Objective	Average Rating (1=not an objective, 4=top priority objective)
Align IT with overall business goals	2.90
Deliver new functionality to business users	2.86
Meet internal or external service level agreements	2.69
Using IT to support revenue growth; new products	2.65

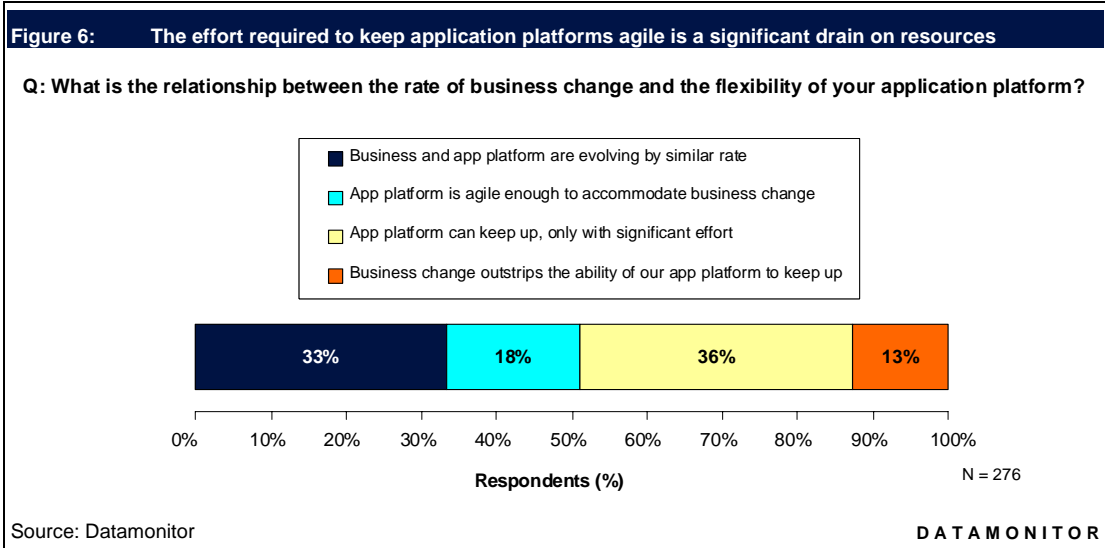
Source: Datamonitor Technology Trends Survey (418 respondents) DATAMONITOR

Datamonitor research shows that significant investments in business alignment and agility are confined mostly to very large organisations of 10,000 or more employees, yet fewer than 35% are making such investments. A likely explanation is that IT decision makers are so consumed by maintenance tasks that they fail to allocate resources to or focus on broader business objectives.

The second most-common business objective overall is the ability to deliver new functionality to business users. This typically requires the implementation of new IT processes or applications, for which IT decision makers currently do not have the time or resources.

Enterprise application platforms are not keeping up with business changes

Nearly half of all enterprise application platforms are failing to keep pace with business changes. Almost 40% of respondents believe that their application platforms remain up to date, but only by significantly draining their IT departments' resources. Meanwhile, 13% find that business change simply outstrips their application platforms' ability to keep up.



There is an escalating rate of change in the broader European business climate, driven by regulatory overhaul and macroeconomic conditions. Datamonitor believes this trend will continue and that, during the next several years, even fewer application platforms will be agile enough to accommodate increasingly dynamic business environments.

Application platform standardisation and simplification are thought of as a strategic goal

Despite lacking the resources to keep IT and application platforms in step with business changes, IT decision makers regard the standardisation and simplification of their IT systems to be their most important major strategic goals.

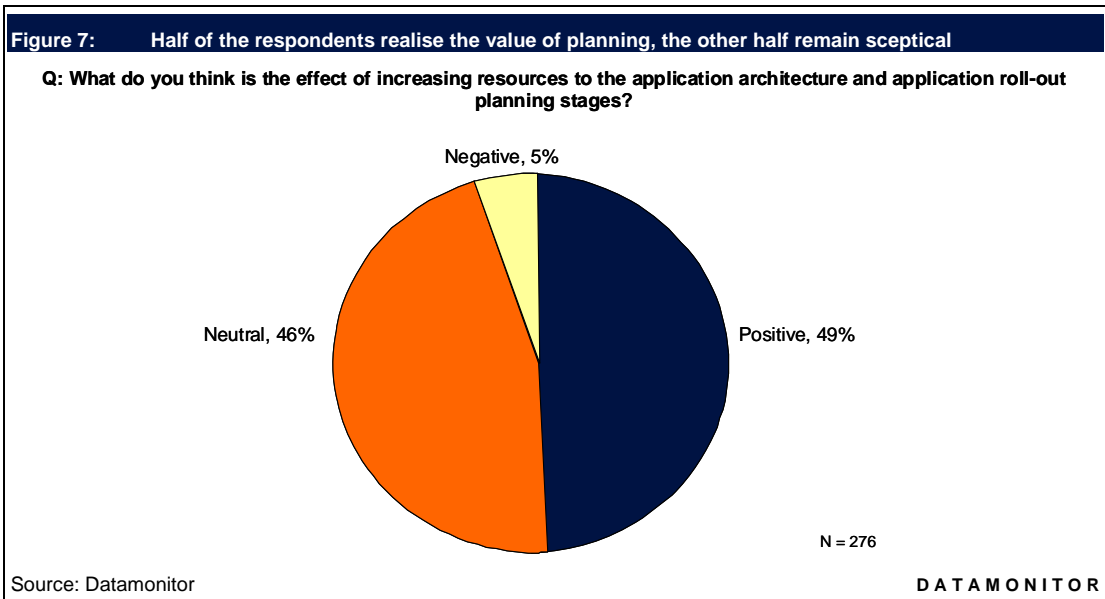
Table 2: What are your major strategic goals for this year?	
Objective	Average Rating (1=not influential; 4=highly influential)
Standardising infrastructure technologies (e.g. servers, network)	2.94
Systems simplification (consolidate on existing systems)	2.93
End-to-end business transformation projects (including core systems replacement)	2.61
Moving towards a shared services model	2.48
Business process outsourcing (BPO)	1.96

Source: Datamonitor Technology Trends Survey (418 respondents) DATAMONITOR

Standardising and simplifying application platforms would significantly cut down maintenance workloads, freeing up resources for broader IT/business alignment and new IT functionality, which are the top investment objectives for IT decision makers.

IT decision makers are increasingly uncertain regarding the benefits of application rollout planning

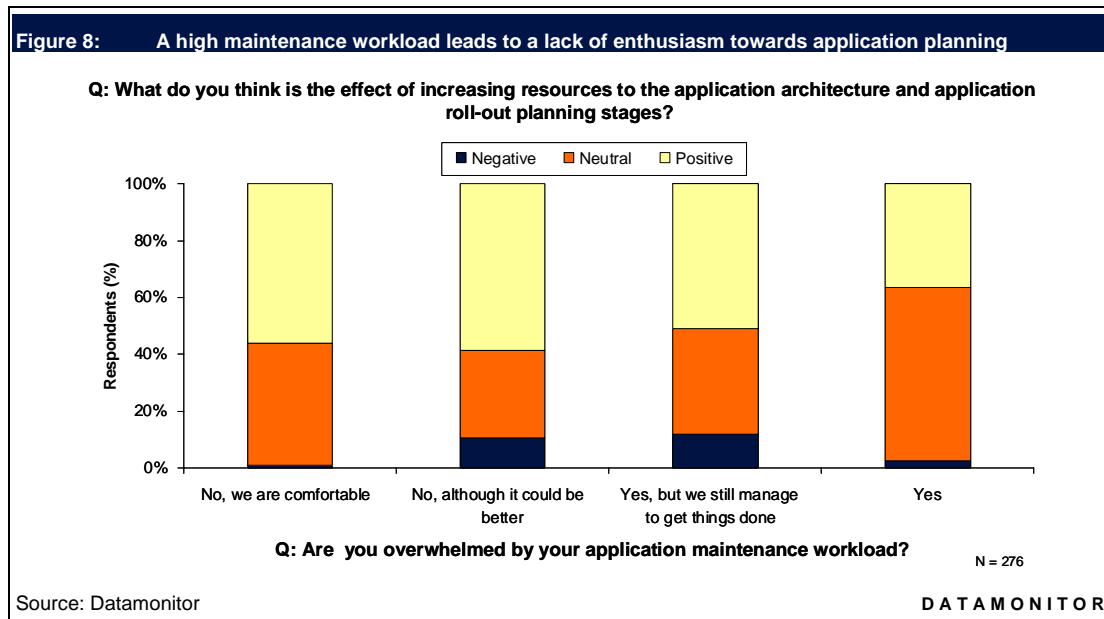
About half of IT decision makers surveyed are sceptical of the benefits of planning application rollouts, while the other half recognise the positive value of planning.



Among the sceptics, the vast majority believe there is no discernible benefit, positive or otherwise, to application rollout planning. Datamonitor attributes this to IT decision makers being so overwhelmed by application maintenance that they have simply lost faith in the promise of application rollout planning.

Those IT departments that are overwhelmed by application maintenance do not see the benefit of planning

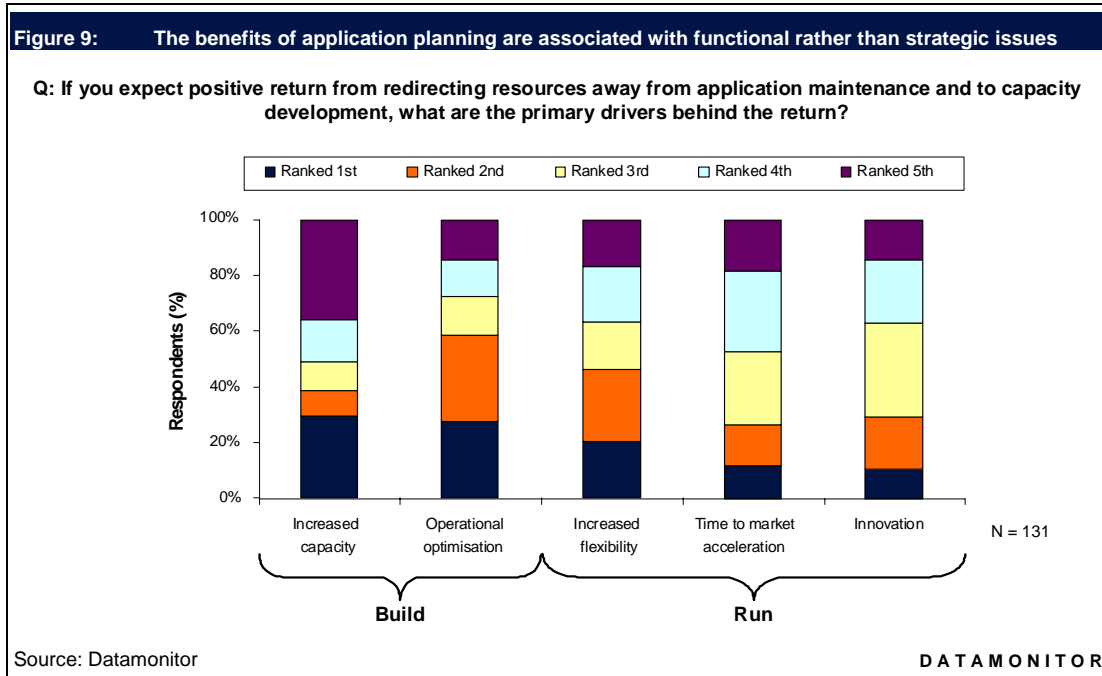
The more comfortable decision makers are with their application maintenance workload, the more likely they are to have a positive attitude toward application planning.



Conversely, the IT decision makers who feel most overwhelmed by application maintenance have the least positive perception of application planning. Datamonitor believes the scepticism of these overwhelmed decision makers can be largely attributed to a sense of hopelessness or 'burn out' over formalised IT strategies. Such decision makers are operating in a state of survival rather than one of enthusiastic optimism.

IT departments see the value of application planning primarily in the 'build' stage

Another factor shaping decision makers' neglect of planning is that most view its value primarily during the 'build' rather than the 'run' stage of an application's deployment. Their focus is on matching user requirements, and boosting the usability and efficiency of applications. Other factors, which pertain to the actual running of an application, are generally secondary.

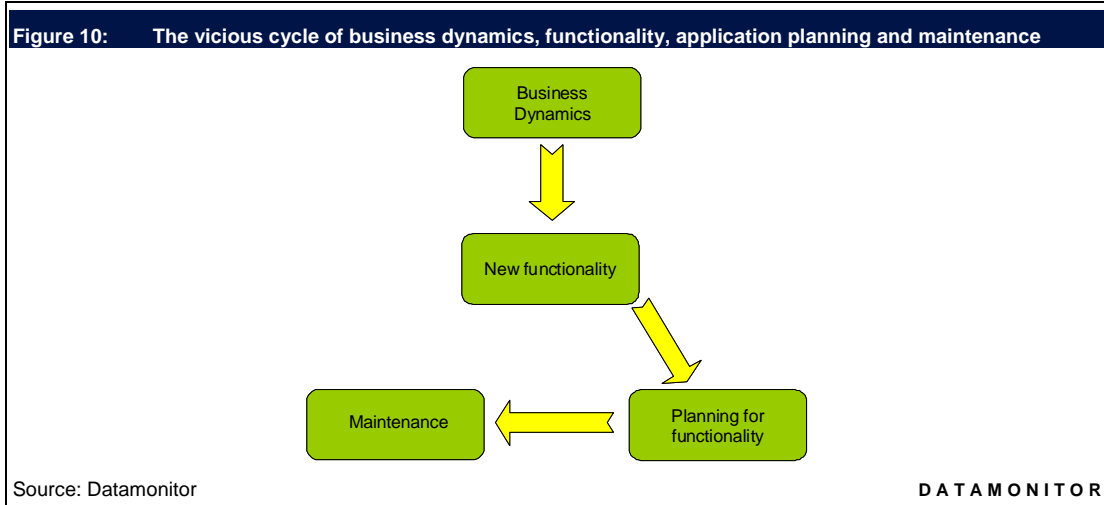


Respondents failed to identify the value of planning throughout an application’s lifecycle. The flexibility and extended lifecycle of an application, as well as the cost of integrating it into an existing application landscape, are relatively low priorities. Yet these 'run' factors are instrumental in reducing application maintenance. By forgoing planning for longevity, IT decision makers have unwittingly compounding their maintenance workloads.

Vicious cycle: maintenance-functionality-lack of planning

Business dynamics are demanding new application functionality, yet adding new or more functions with insufficient planning as to how they will run on an existing application platform creates greater complexity and, in turn, maintenance.

When IT decision makers focus on application functionality, or what to build, they fail to plan for application integration, or how new applications or application features will run in a given environment. By not focusing on how well an application will run, IT decision makers are increasing their future maintenance requirements. This creates a vicious cycle of business dynamics demanding new functionality, which dictates application planning and generates an overwhelming volume of maintenance.



Breaking the vicious cycle

There are several steps that IT decision makers can take in order to break the vicious cycle of maintenance-functionality-lack of planning, which is shown in Figure 10.

Estimate the RoI of moving resources from application maintenance to IT functionality

The vast majority of respondents (82%) believe that if they moved money from application platform maintenance to IT functionality, they would gain a positive, or at least neutral, return on investment (RoI). They estimate an average return of 12% if investment is directed away from maintenance and into functionality. Increased IT functionality includes developing new capacity, integrating new applications and aligning IT with business operations. About 48% of all respondents think they would actually receive a positive RoI, with a higher return, averaging at 20%.

Either way, it is clear that IT decision makers identify the maintenance opportunity costs. By estimating the RoI of moving resources from application platform maintenance to IT functionality, IT decision makers have a base-line target to work towards when planning and implementing a new application platform strategy.

Capitalise on the opportunity costs of maintenance by deploying an agile application platform

To achieve such a RoI, IT decision makers must capitalise on the opportunity costs of maintenance. Instead of building applications that create additional maintenance workload, they can deploy an agile application platform on which applications can be readily built and seamlessly integrated. This would significantly lower the maintenance cost of application delivery.

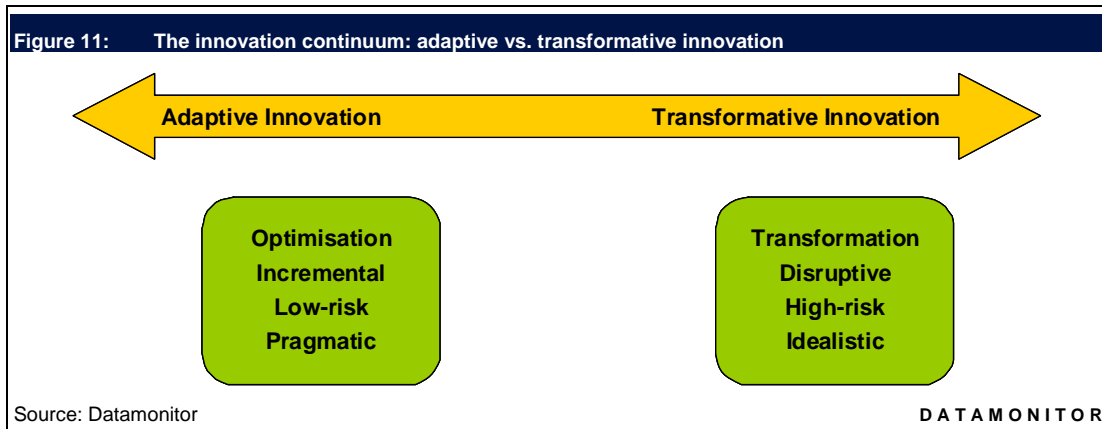
Applications on the platform could also be easily tweaked, without the risk of disrupting other IT processes and applications. An adaptive platform would provide an almost interactive medium for IT departments to build, update and trial

applications. The platform's flexibility would slash maintenance workloads so that more resources could be directed toward business innovation, agility and the alignment of IT with broader business goals.

Promote adaptive and pragmatic innovation rather than disruptive, high-risk approaches

An agile application platform would enable adaptive innovation - the ability to innovate on an existing platform by incrementally adding new or updated applications in response to business changes. This is a low-risk and pragmatic approach because it allows innovation to be conducted within the boundaries of a proven platform. Innovation can also occur in gradual measures, one application at a time, rather than as a 'forklift', or complete upgrade.

Adaptive innovation is in stark contrast to transformative innovation. The latter is disruptive because it introduces new technologies that transform existing IT infrastructure with the promise of a dramatically different value proposition. Transformative innovation is visionary and bucks the status quo and is, therefore, relatively unproven and high risk.



As illustrated in Figure 2, the real-world experience of IT decision makers is that successful transformative innovation is rare. Strategic and innovative use of IT currently accounts for a relatively low proportion of all business innovation, but this may increase if more companies were to adopt adaptive innovation.

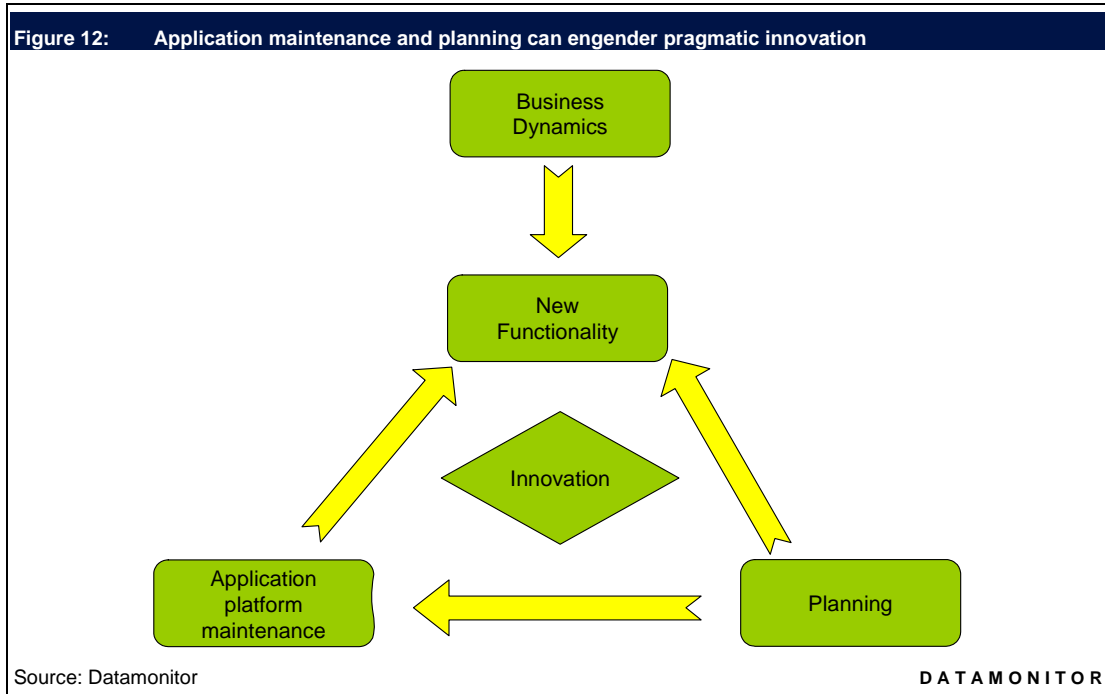
Evaluate success through tangible business outcomes

A key component of adaptive innovation is establishing metrics to measure success on an ongoing basis. Each time maintenance is reduced, IT decision makers must link any savings to an outcome that contributes toward a business objective. This ensures that IT remains focused on the overarching goal of contributing to the business. Otherwise, there may be a tendency to build applications that are not entirely relevant, and to innovate merely for innovation's sake, which is the antithesis of adaptive innovation.

Consider application maintenance as the key to dynamic IT aligned with the business

When application planning is at the forefront of an IT department's workload, by means of an agile application platform, new functionality and application platform maintenance follows. A flexible application platform enables IT to build and run new applications and functionality that will readily integrate into an existing application landscape. This leads to reduced application maintenance, which frees up resources for IT to focus on building and running even more new applications and

functionality. The result is pragmatic innovation. The virtuous cycle of adaptive innovation, shown in Figure 12 below, is contrary to Figure 10, the vicious cycle of transformative innovation, in which functionality dictates planning and generates an overwhelming maintenance workload that, in turn, stifles innovation.



A vital component of adaptive innovation is innovating for business improvement. This is most often achieved in incremental steps and primarily as the result of reducing maintenance workloads. The process of more effectively maintaining applications may seem relatively mundane when compared to the exciting – yet often unrealistic – promise of transformative innovation. Yet Datamonitor research shows that adaptive innovation, as an outcome of reduced maintenance, delivers greater results in terms of the closer alignment of IT with business objectives, as well as a greater return on IT investment.

DEFINITIONS

Adaptive innovation – the ability to innovate on an agile application platform by incrementally adding new or updated applications in response to business changes. This is a low-risk and pragmatic approach because innovation is conducted within the boundaries of a proven platform. Innovation can also occur in gradual measures, one application at a time.

Maintenance workload – the total time and resources spent by an IT department on maintaining existing IT, as opposed to time spent on innovation. Typical maintenance workloads consist primarily of tasks such as installing security updates, patching application bugs and processing requests.

Transformative innovation – often refers to innovation via a 'forklift' application upgrade or to the introduction of new technologies that transform existing IT infrastructure in the promise of a dramatically different value proposition. Transformational innovation is visionary, disruptive and high risk.

APPENDIX

Ask the analysts

Vuk Trifkovic, vtrifkovic@datamonitor.com

Rhonda Ascierio, rascierio@datamonitor.com

Disclaimer

All Rights Reserved.

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the publisher, Datamonitor plc.

The facts of this report are believed to be correct at the time of publication but cannot be guaranteed. Please note that the findings, conclusions and recommendations that Datamonitor delivers will be based on information gathered in good faith from both primary and secondary sources, whose accuracy we are not always in a position to guarantee. As such Datamonitor can accept no liability whatever for actions taken based on any information that may subsequently prove to be incorrect.