Flash Drives Business Transformation in the Digital Age

- Managing Business Transitions
- Rising Business Imperatives
- Enabling Business Agility
- Accelerating Business Performance
The rise of a new digital age

The beginning of digital transformation for industries, governments and economies is based on the three key enterprise IT mega trends:

- The modernisation of IT legacy in CIO’s ‘2.5 platform’ IT land – Agility is the new table stake
- Harnessing cloud, mobile, big data analytics and social business mash-up benefits for LoBs
- Innovation acceleration — New competition as well as new business and operating models are the new normal
**CEO challenges**

The disruption from new players and business/consumption models is challenging CEOs, creating an urgent need to transform their organisations to one that is agile and with the ability to make decisions quicker. Technologies that are able to help deliver insights faster have therefore become top of mind for CEOs and their leadership teams.

**MARKET REALITY**

- Escalating cost of operations
- New business models
- New competitors
- Changing customers’ buying patterns
- New government regulations

Source: IDC Asia/Pacific C-Suite Barometer 2015
Manage the technology

To address organisational and CEO challenges, CIO and IT need to look into new technology capabilities and solutions to optimise, redefine and/or transform current processes and operating models. And to successfully manage these business transitions in the new digital age, CIO and IT require a deep understanding of business imperatives as well as the ability to enable business agility and accelerate business performance.

Asia/Pacific Business Priorities

- Automation and acceleration as core themes for the CIO
- Removal of “fat” from systems of records
- Business agility expectation on the rise
- Growing CMO and CSO buying centres with CX as the #1 priority
- Innovation agenda drives the rise of tech CxO

Source: IDC Asia/Pacific C-Suite Barometer 2015
Every organisation will need to digitally transform in this new age.

Digital transformation (DX) is the continuous process by which enterprises drive disruptive changes in their external ecosystem via leveraging digital competencies. This innovative process leads to the creation of new business models, products and services that blend digital and physical as well as business and customer experience while improving operational and organisational performance.

\[
\text{DX} = \text{DIGITAL TWIN}\text{S*} + \text{DIGITAL EXPERIENCE}
\]

*Digital Twins are the digital version of an organisation's product/service portfolio
For the DX journey, CIO and their business peers will need to transform 5 aspects of their organisation:

- Leadership transformation
- Omni-experience transformation
- Information transformation
- Operating model transformation
- Worksource transformation

RISING BUSINESS IMPERATIVES

- Enabling Business Agility
- Accelerating Business Performance
CxO’s rising digital priorities

**BUSINESS IMPERATIVES**

Which of the following business imperatives are being driven by digital transformation of business processes and business model in your organisation?

- **74.9%**
  - Quickly bring to market new products and services

- **74.6%**
  - Build deeper understanding of customers’ buying preferences

- **61.5%**
  - Improve the quality and response time of post-sales services

**MARKET WATCH**

In India, Australia and Japan, optimal utilisation of resources to drive cost down is one of the top 3 business imperatives

Source: IDC Asia/Pacific AFA Storage Survey, July 2015 (N=709 for six country markets)
### CxO’s rising digital priorities (Cont’)

**Top Strategies**

Which approaches best describe your organisation’s strategy to leverage its digital information assets?

<table>
<thead>
<tr>
<th>Approach</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leveraging data discovery tools to extract content from all sources and create business value through analytics</td>
<td>75.5%</td>
</tr>
<tr>
<td>Data warehousing is used for structured data; web/content management systems are used for unstructured data</td>
<td>61.8%</td>
</tr>
<tr>
<td>Data delivered as a service for all facets of the business</td>
<td>48.5%</td>
</tr>
</tbody>
</table>

**Top Approaches**

What's your approach to digital value realisation?

<table>
<thead>
<tr>
<th>Approach</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation optimisation, real-time orchestration of resources and business model innovation</td>
<td>78.8%</td>
</tr>
<tr>
<td>Digital twins created for all company offerings</td>
<td>69.5%</td>
</tr>
<tr>
<td>Product enhancement and digital fulfillment</td>
<td>52.0%</td>
</tr>
</tbody>
</table>

Source: IDC Asia/Pacific AFA Storage Survey, July 2015 (N=709 for six country markets)
With multi-core processors and IO-hungry applications in today’s enterprise and web-scale organisations, the performance bottleneck has moved from the server to storage. The goal of flash is to deliver application acceleration through low latencies and high input/output operations per second (IOPS).

Flash dramatically improves application performance and employee productivity, as well as test and development cycles. The gap between compute power and storage performance has widened thanks to the increasing adoption of server virtualisation, Big data analytics (BDA) and virtual desktop infrastructure (VDI) in industries like entertainment and media, healthcare, science, banking and finance and retail.

Since hard disk drives (HDDs) cannot offer the necessary performance in terms of IOPS and latency for mission-critical workloads, flash-powered solutions are stepping up as a viable alternative.
Drives Business Transformation in the Digital Age

All-Flash Array

CURRENT ADOPTERS

Respondents who are users of AFA: 16%

Respondents who are testing/planning to deploy AFA in the next 12 months: 56%

Market Watch

Australia, Singapore and India have the highest current user pool. Australia and Singapore users are early adopters of 3rd platform applications such as BDA and mobility. These adopters need disruption in their storage infrastructure for agility, speed, performance and cost optimisation.

82% of respondents in China and 43% in Korea are evaluating or planning to use AFA in the next 12 months.

AFA STORAGE NOW

How many terabytes of primary storage capacity is currently deployed on AFAs in your organisation across all facilities in the country?

- < 10 TB: 3.8%
- 10 - < 25 TB: 22.8%
- 25 - < 50 TB: 47.9%
- 50 - < 100 TB: 16%
- 100 - < 500 TB: 7.2%
- > 500 TB: 2.3%

36% of respondents have 10% to <20% of their total primary storage capacity deployed on AFA.

Source: IDC Asia/Pacific AFA Storage Survey, July 2015 (N=709 for six country markets)
All-Flash Array (Con't)

**TOP DRIVERS FOR AFA ADOPTION**

- **69%**
  - Reduction in enterprise hardware acquisition budget
- **68%**
  - Reduce product development cycles/quick-to-market
- **63%**
  - Support larger number of customers, partners and suppliers

**TOP REASONS FOR AFA DEPLOYMENT**

- **56%**
  - Increased scalability
- **54%**
  - Improved storage and application administration automation
- **42%**
  - Increased utilisation of storage capacity

A close 4th reason (41%) is reduction in power costs

**MARKET WATCH**

- In India, new channels of delivery and engagement (eCommerce/mCommerce) is the #2 driver
- In Singapore, performance bottleneck impacting business expansion is the #3 driver

Source: IDC Asia/Pacific AFA Storage Survey, July 2015 (N=709 for six country markets)
**All-Flash Array (Con’t)**

**Applications on AFA**

<table>
<thead>
<tr>
<th>Asia/Pacific</th>
<th>Australia</th>
<th>India</th>
<th>Japan</th>
<th>Korea</th>
<th>China</th>
<th>Singapore</th>
</tr>
</thead>
<tbody>
<tr>
<td>App development</td>
<td>App development</td>
<td>Biz apps</td>
<td>BI/data analytics</td>
<td>Collaboration</td>
<td>App development</td>
<td>App development</td>
</tr>
<tr>
<td>Collaboration</td>
<td>Email/messaging</td>
<td>App development</td>
<td>Collaboration</td>
<td>BI/data analytics</td>
<td>Collaboration</td>
<td>Collaboration</td>
</tr>
<tr>
<td>BI/data analytics</td>
<td>Batch processing</td>
<td>Collaboration</td>
<td>App development</td>
<td>Email/messaging</td>
<td>BI/data analytics</td>
<td>Batch processing</td>
</tr>
</tbody>
</table>

**Availability and Performance are Key Themes**

**99.999%**

Availability is the #1 feature/function in the selection of AFA

Source: IDC Asia/Pacific AFA Storage Survey, July 2015 (N=709 for six country markets)
**All-Flash Array (Con’t)**

**Technology Selection Criteria**

- **74%**
  - Easy to replicate, back-up, archive and restore primary data

- **68%**
  - Ease of management – self-tuning and self-service operations

- **63%**
  - Ability to create pool of storage resources

**Insight**

AFA will be a cornerstone of the cloud journeys undertaken by Asia/Pacific organisations in the coming years.

**Vendor Selection Criteria**

- **75%**
  - Leading technology benchmarks during evaluation process

- **69%**
  - Market ranking/leadership in AFA segment

- **63%**
  - Strong recommendation by technology partner — SI, ISV, VAR or corporate reseller

**Market Watch**

- In Korea, the #3 most important criterion is incumbent primary storage array vendor
- In Singapore, the #2/#3 (tie) most important criterion is recommendation by industry peers

**Top AFA Vendor**

**EMC²** is #1 in the Asia/Pacific AFA market

Source: IDC Asia/Pacific including Japan Quarterly Disk Storage Systems Tracker, Q1 2015
**Flash**

Drives Business Transformation in the Digital Age

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**Performance**

**Usage for AFA**

What are some of the operational challenges that you experience in your existing storage environment that you want AFA to potentially solve?

- Increasing application service level demands: 60%
- Lack of automation: 56%
- Rising complexity: 54%

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**Confidence for AFA**

Respondents who are “moderately to very confident in exploiting AFA technology to generate significant business innovation today or in the future”

89%

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**Market Watch**

- Storage sprawl/heterogeneity is the #1 operational challenge in Australia
- In Singapore, the top 2 challenges are application performance bottlenecks and storage sprawl/heterogeneity
- In China, lack of IT-led business innovation is the #3 operational challenge

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**Most Confident Markets**

China, Singapore and Australia are the most confident in exploiting AFA to generate significant business innovation

- China: 63.5%
- Singapore: 58.5%
- Australia: 58%

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Source: IDC Asia/Pacific AFA Storage Survey, July 2015 (N=709 for six country markets)
Performance (Con’t)

**A FA BEC OMING A R E A L I T Y**
When will all-Flash datacentre become a reality for all active workloads in your datacentre?

<table>
<thead>
<tr>
<th>UNDER 5 YEARS</th>
<th>UNDER 2 YEARS</th>
</tr>
</thead>
<tbody>
<tr>
<td>75%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Singapore, India and Australia have the highest number of respondents who foresee going all-Flash within 2 years.

| 29%           | 25%           | 23%           |

When considering the high-performance requirements of the 3rd computing platform and the confluence of technologies around flash that are bringing its effective cost down for many enterprise-class offerings, the benefits of Flash deployment are clear.

**LEADING BENEFITS**

- Allowing data to be shared and accessed across functions quickly
- Delivering faster/real-time insights to turn data into decision making power and new monetisation opportunities
- Minimising latency with greater data volume and more user accessibility
- Increasing the green footprint of datacentre through physical space, heat and noise reduction

The secondary economic benefits of broad Flash deployment within an enterprise are:

- Far fewer devices required to meet storage performance requirements
- Lower energy and floor space costs
- Fewer servers required to drive storage performance
- Lower software licensing costs (because of fewer servers needed)

They create a compelling total cost of ownership (TCO) story against which HDD-only systems cannot compete.
Performance (Con’t)

CREATE TRUE AGILITY FOR YOUR WORKLOADS AND DO THE SAME FOR YOUR BUSINESS

Transforming your data centre can totally change your business and storage is key to accelerating the whole process. Databases and analytics. Business applications. Hybrid cloud. Mixed workloads. Everything.

360° IT consolidation and optimisation drives agility across your entire organisation. You’re able to respond, react and succeed in ways that were once, frankly, impossible.

How? With XtremIO. The world’s #1, totally purpose-built, scale out, all-flash array powered by Intel processors.

XtremIO delivers not just the fastest, most reliable AFA in the industry but also offers patented technology that delivers three revolutionary storage breakthroughs:

- **INFRASTRUCTURE**
  Consistent, sub-millisecond, linear scale-out performance

- **APPLICATIONS**
  Simple self-service for infrastructure and application teams

- **BUSINESS**
  Up to 50% lower OPEX and CAPEX
**The checklist**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>True linear consistent performance</td>
<td>In-line all-the-time application and data services including thin provisioning, high availability, data reduction, encryption and in-memory writeable snapshots.</td>
</tr>
<tr>
<td>Common management, orchestration and provisioning tools</td>
<td>Ease of management, plug-n-play optimisation, agile copy services and seamless capacity growth.</td>
</tr>
<tr>
<td>High availability including native replication and integrated backup</td>
<td>Enabling agility through consolidating mixed workloads and accelerating workflows.</td>
</tr>
<tr>
<td>Application integration and automated workflows (eg. Oracle, SAP, Exchange, VMWare, Openstack, Hyper-V)</td>
<td>CAPEX and OPEX savings of over 50% compared to their traditional storage silos.</td>
</tr>
</tbody>
</table>

**Managing Business Transitions**

**Rising Business Imperatives**

**Enabling Business Agility**

**ACCELERATING BUSINESS PERFORMANCE**

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*EMC²*