How Agile is game changer in Storage development and best practices to transform from traditional model to agile model.

Presenter :

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Session Agenda

- A Quick Overview of Agile Methodology.
- Waterfall vs Agile Development Model.
- Key success points for Agile Adoption.
- The IBM Agile Manifesto.
- Being Agile….Journey of Transition from Waterfall to Agile Model!
- Major Challenges and Reasons for Agile Projects to fail.
- Agile Facts and Figures.
- What makes IBM Storage Offerings Different.
- Case Study.
- Conclusion.

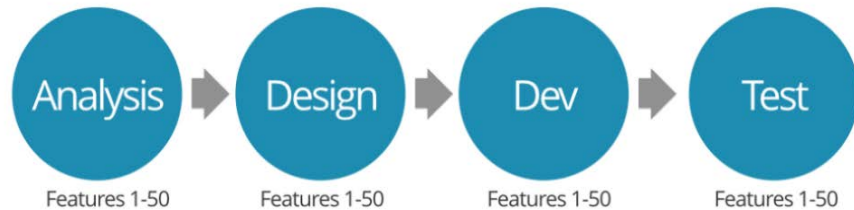**SDC 16**

A Quick overview of Agile Methodology:
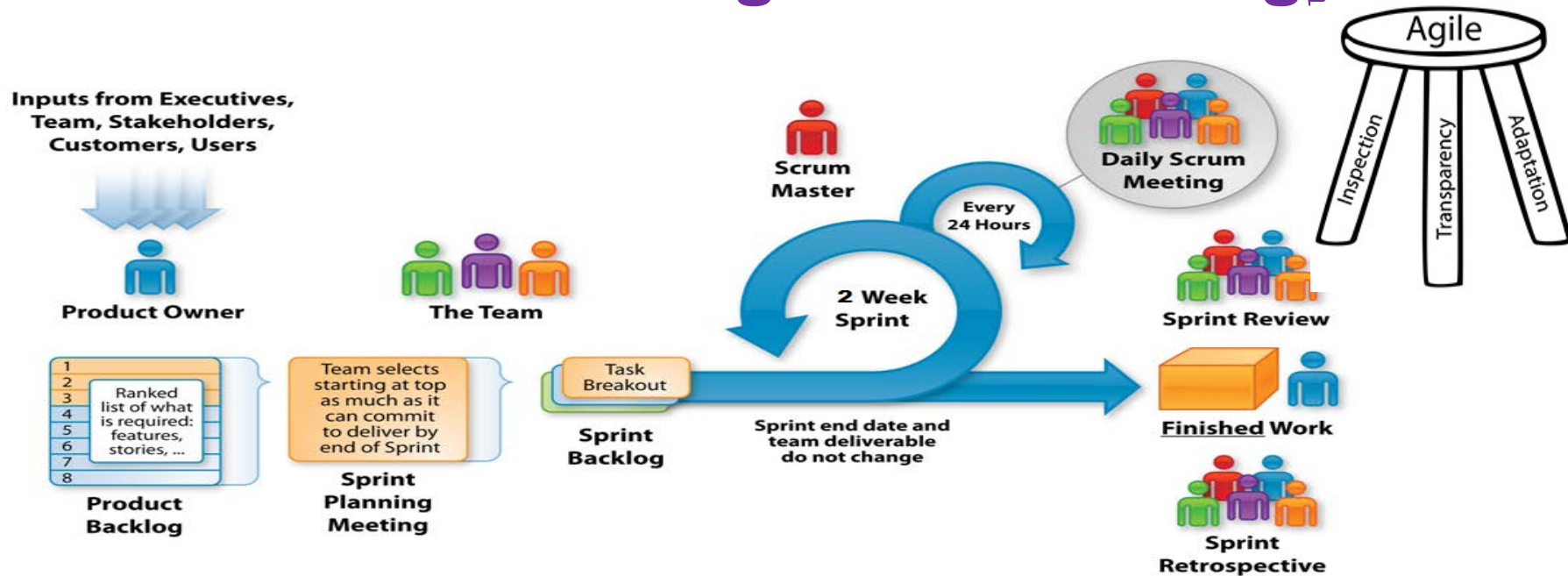
Agile (Agile Software Development to be more precise) formally came into existence in 2001 and was very much a reaction to the waterfall model. It is a "conceptual framework that focuses on frequently delivering small increments of working software" and came about as an attempt to:
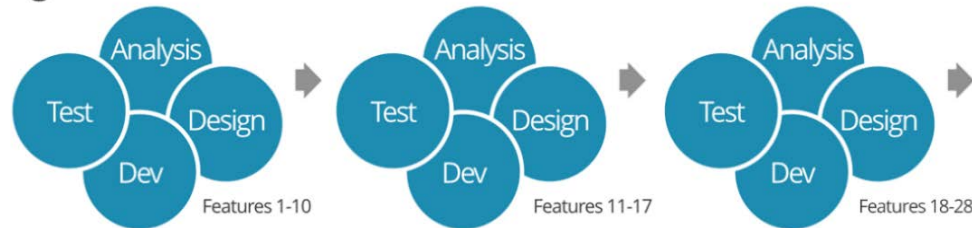
➤ Achieve efficiency, leanness and remove waste from the process
➤ Respond to change and unpredictability
➤ Develop the right product for the user.
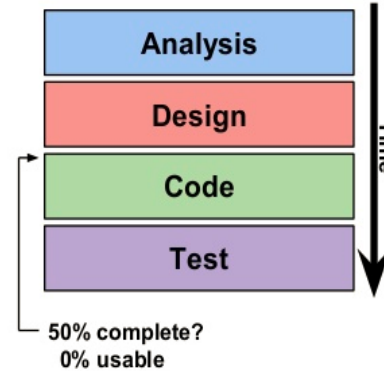
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Waterfall vs Agile Development Model:

Waterfall

Analysis → Design → Dev → Test

Features 1-50 | Features 1-50 | Features 1-50 | Features 1-50

Agile

Test / Analysis / Design / Dev — Features 1-10
Test / Analysis / Design / Dev — Features 11-17
Test / Analysis / Design / Dev — Features 18-28

Software development process

Traditional

| Analysis |
| Design |
| Code |
| Test |

Time

50% complete?
0% usable

Agile

Time

Analysis
Design
Code
Test

25% complete
100% usable
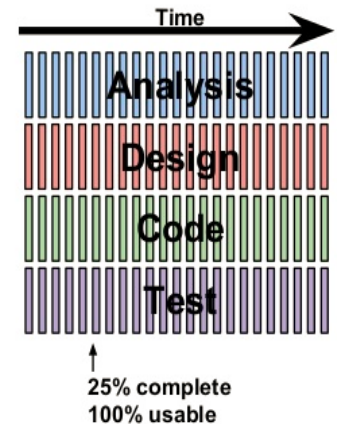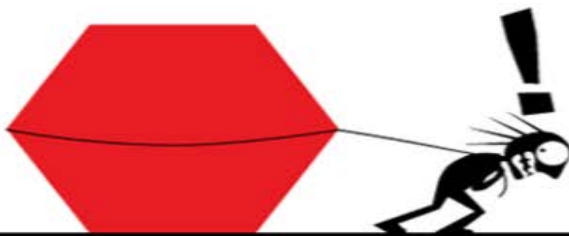
THE WATERFALL PROCESS

'This project has got so big,
I'm not sure I'll be able to deliver it!'

THE AGILE PROCESS

'It's so much better delivering this
project in bite-sized sections'

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Key success points for an Agile adoption:

- ➢ Increased flexibility in adapting to customer requirements
- ➢ Increased test automation & regression to ensure higher quality
- ➢ Breaking down roles, rotating roles
- ➢ Open communication between team members
- ➢ Developers take more ownership in the quality of the release

- ➢ **Increased collaboration between dev & test. We are all on the same team.**
- ➢ **Stories help the team focus on delivering value to customer**
- ➢ **Working in small teams of 3 to 4 increased collaboration**
- ➢ **Team took over ownership of Sprint content**
- ➢ **Team commits to what they can deliver and takes pride in demo'ing to stakeholders**

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The IBM Agile Manifesto:

Agile development for storage products must :

Address **complex architectural** requirements.	Provide effective **governance.**	Strengthen solution **quality and consumability.**	Be **disciplined.** Disciplined Agile Delivery	Be effective for **all types of development:.**	Provide integration processes for **small and large teams across multiple sites and time zones**.

Team size

Under 10 developers ⟷ 1000's of developers

Geographical distribution

Co-located ⟷ Global

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Being Agile….Journey of Transition from Waterfall to Agile Model!

The transition from waterfall to Agile software development requires Careful planning, Collaboration and Change management.

Not many people have worked in a truly Agile environment, so there may be a fear of the unknown or "how it's done," and a compulsion to stick with what they know — i.e., Waterfall.

Being Agile : Journey of Transition from Waterfall to Agile Model… Contd…

Below rules and steps can be followed for this journey of transition from traditional model to Agile Model

1. Describe what is changing
2. Define Vision, Mission and Objective.
3. Make a Transition Plan, Start Small with Agile Pilot Teams.
4. Training.
5. Consider People.
6. Be Explicit about your Agile Goals.
7. Commitment
8. Avoid Delays- Test As you Go.
9. Scale to the entire Organization
10. Institutionalize and continuous improvement.

Being Agile : Journey of Transition from Waterfall to Agile Model… Contd…

☐ Describe what is changing.

➢ Most important step that the leadership team should consider when beginning the transformational journey.

➢ They should clearly articulate the vision for change and how the business and the IT organization would benefit from that change, how traditional practices of solution development will change when embracing Agile ways of working.

➢ They should highlight why the decision to try and implement the Agile model has been made and why and how the key stakeholders would be impacted by the change.

The Key is to gain a common understanding of what it means to YOU the TEAM & the Enterprise to

"Be Agile"

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Being Agile : Journey of Transition from Waterfall to Agile Model…Contd…

□ Define Vision, Mission and Objective.

Sharing vision, mission and objective is the another important step.

Most organizations are seeking higher level, higher productivity, better quality software, early feedback with demos/iterations, working software/product after every release/sprint, transparency.

Being Agile : Journey of Transition from Waterfall to Agile Model…Contd...

☐ Make a Transition Plan, Start Small with Agile Pilot Teams

➢ Make a transitioning Plan after having a proper brainstorming and get Management buy-in on the transition approach.

➢ Limit risk by identifying a pilot teams. Identify the right set of people. Include members with experience in Agile development and people who were running projects under traditional methods but are now convinced that Agile would yield better benefits.

➢ Start small and Implementation teams should have freedom and flexibility to navigate through the organizational structure and get their tasks done.

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Being Agile : Journey of Transition from Waterfall to Agile Model… Contd…

□ Training and Coaching

Agile Awareness

- ➤ Any transition requires training people with new method, process and practice. The traditional way of introducing agile to teams is to encourage teams to go through a training course.

- ➤ Agile methods need to be taught in an agile way and can be customize for your organization.

- ➤ A key component of these training courses should be behavioral aspects of the team.

- ➤ Seek the services of external consultants, trainers, and coaches to conduct structured and information packed sessions to the teams. The coaches would provide on the job input, tips, and best practices to the teams while they implement the Agile practices in their projects.

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Being Agile : Journey of Transition from Waterfall to Agile Model… Contd…

☐ Consider People

- ➢ Build an environment of trust

- ➢ Train your Executives on your app

- ➢ Establish a new relationship with tl

- ➢ Use Mentors/Coaches

- ➢ Use Champions/Sponsors

- ➢ Keep it fun

Big projects	Decoupled development and flexible releases
System/development/test silo organization	Cross functional teams
Individual offices	Team spaces
Narrow & specialized competences	Broader competences and continuous learning
Individual accomplishment	Team success
Following a defined & detailed processes	Agile and Lean thinking
Top down control	More people initiative and self organization

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Being Agile : Journey of Transition from Waterfall to Agile Model… Contd...

☐ ….It's all about people

➤ Make changes on how people collaborate in software development teams.

➤ Behavioral and organizational change must be introduced in a planned fashion

➤ Without appropriate guidance and the right people and the right strategy teams/organizations often fail to adopt the process and tools effectively
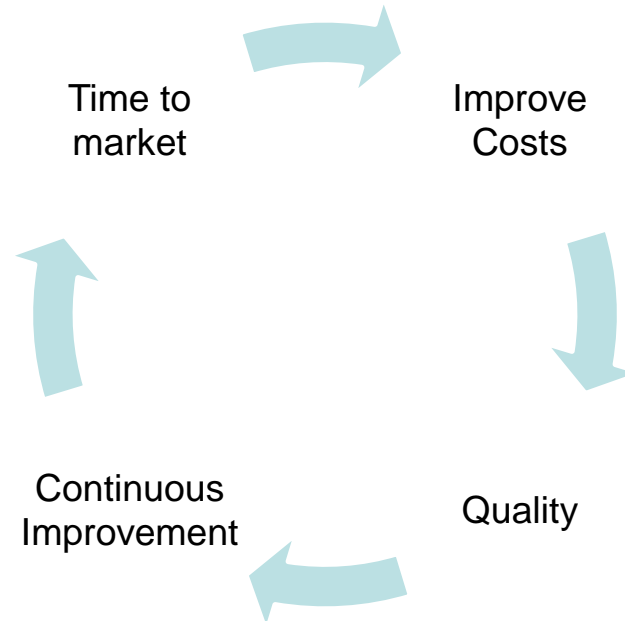

IT'S ALL ABOUT PEOPLE!

Being Agile : Journey of Transition from Waterfall to Agile Model…Contd…

☐ Be explicit about your agile goals

Business Needs Driving Agile Transformation:

➢ Time to market

➢ Improve Costs

➢ Quality

➢ Continuous Improvement

Time to market → Improve Costs → Quality → Continuous Improvement → (cycle)

Being Agile : Journey of Transition from Waterfall to Agile Model…Contd…

☐ Avoid Delays – Test as You Go!

Organizations often make the mistake of enacting consecutive 'Mini Waterfalls' in their approach to testing.

They postpone testing to the end of the iteration, they in effect produce a 'Mini Waterfall'. In this situation, once testing is finally implemented there is no time to repair the mistakes and defects discovered.

☐ Commitment

com**mit**ment

Empower agile teams to make decisions. Protect agile teams from outside influences and managerial paradigm.

Moving resources or mixed personalities or not funding/motivating team impact team velocity and transition to Agile.

Being Agile : Journey of Transition from Waterfall to Agile Model…Contd…

☐ Scale to the entire organization

➢ Based on the results of the experiments, the implementation team should plan for implementing Agile practices across the IT organization.

➢ Here again, the branding and communication activities are the key. Pilot results should be broadcasted to the organization, reinforcing positive messages and explaining the way forward.

➢ As part of the communication campaign, IT leadership could request the key business stakeholders to come and address the larger IT group, explaining the benefits that they have realized through the IT projects that adopted Agile early in the transformational journey.

➢ Leadership could also encourage nontechnology projects and initiatives to adopt Agile practices, with necessary tailoring. This way the entire organization would be tuned to work in an Agile mode.
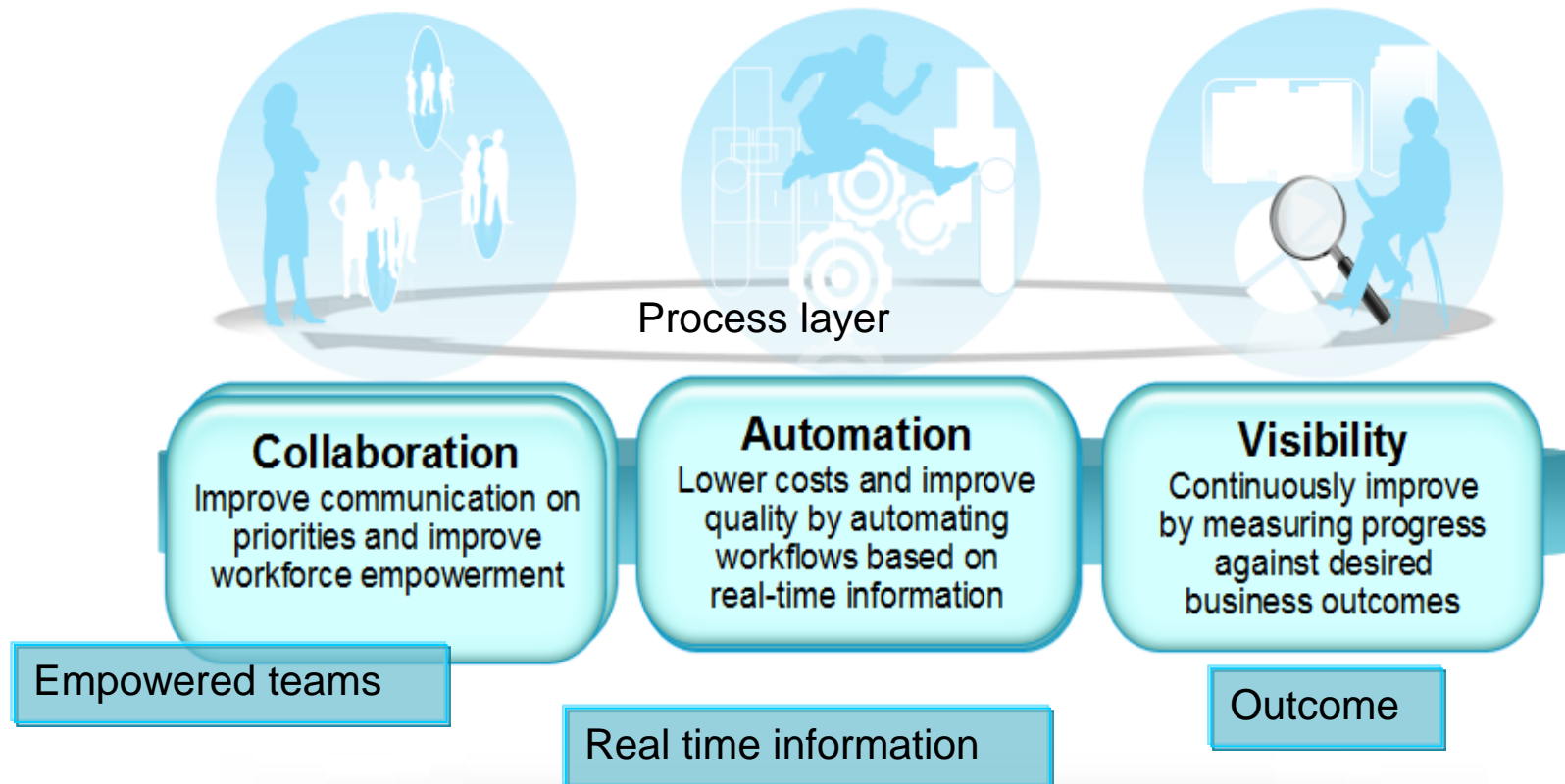
Being Agile : Journey of Transition from Waterfall to Agile Model… Contd…

☐ Institutionalize and continuous improvement.

- ☐ To successfully scale up Agile adoption, the implementation team, with direction from leadership, should draft the long term plan to sustain the change and embed it in the organization's culture.

- ☐ Rewards and recognition are key tools to communicate the leadership commitment and support to sustained Agile adoption.

- ☐ While governing Agile adoption, the IT leadership should seek feedback from the stakeholders, especially the business leadership, on a continuous basis to validate that the business is in fact benefited by the largescale adoption of Agile practices.

- ☐ Thus Agile transformation is an organizational change management exercise. It should be planned and executed in an integrated manner with support and commitment from all stakeholders.
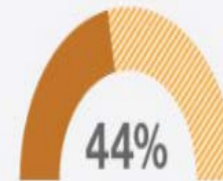
So what is the focus for agility in …

……..this context of the Global Enterprise…

Process layer

Collaboration
Improve communication on priorities and improve workforce empowerment

Automation
Lower costs and improve quality by automating workflows based on real-time information

Visibility
Continuously improve by measuring progress against desired business outcomes

Empowered teams

Real time information

Outcome

Major Challenges and Reasons for Agile Projects to fail.

- Lack of Experience with Agile Methods.

- Company Philosophy or Culture at Odds with Core Agile Values

- Lack of Management Support

- External Pressure to Follow Traditional Waterfall Processes

- Lack of Support for Cultural Transition

- A Broader Organizational or Communications Problem

- Unwillingness of Team to Follow Agile

- Insufficient training

What causes Agile projects to fail?

44% Lack of experience with Agile methods

42% Company philosophy or culture at odds with core Agile values

38% Lack of management support

37% External pressure to follow traditional waterfall processes

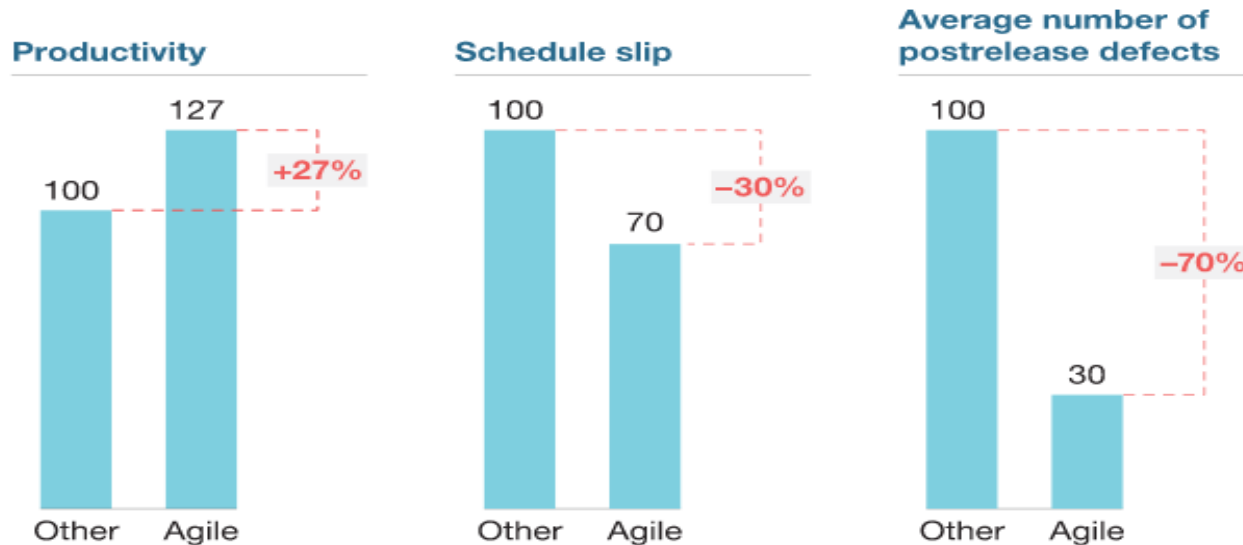36% Lack of support for cultural transition

33% A broader organizational or communications problem

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Agile Facts and Figures.

☐ Analysis of more than 1500 projects suggests the value of Agile

Performance of teams using agile software development vs those using all other software-development methods,[1] % of 'other'

Productivity — Other: 100, Agile: 127, +27%

Schedule slip — Other: 100, Agile: 70, −30%

Average number of postrelease defects — Other: 100, Agile: 30, −70%

[1]Based on more than 1,500 projects in Numetrics industry software database.

McKinsey&Company | Source: Numetrics; McKinsey analysis

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What makes IBM Storage Offerings Different.

➢ Teams working on IBM storage products have extensive experience in helping organizations adopt agile practices and transform to improve business performance.

➢ For each engagement, whatever its scale, we mobilize selected resources from our global network.

➢ World class product development tools.

➢ Thought leadership along with strategic focus to help deliver competitive advantage for your business success.

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Case Study

➢ Sharing experience of IBM's SAN VOLUME CONTOLLER (SVC), journey of transition from traditional to Agile Development model.

➢ The IBM SAN Volume Controller (SVC) is a block storage virtualization appliance that belongs to the IBM System Storage product family. SVC implements an indirection, or "virtualization", layer in a Fibre Channel storage area network (SAN).

➢ This IBM's storage product has been in market from more than a decade now with vast footprints and large customer base. It started with traditional development model approach and over the period the agile ways of development have been adopted and this journey of transition is still going on with the goal of becoming pure agile in near future.

➢ Sharing my thoughts and experiences over this journey of transition…

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Conclusion...

- Agile is a complete game changer in storage development world.
- It works! – even in a large development organization where process maturity is essential
- Simple ≠ easy
- The challenges related to adopting agile are well known
  - The relative importance of these challenges and how they can/should be addressed is different for each organization
  - A blend of approaches, methods, tools and practices is needed
  - Piloting is the best way to identify where to focus
- Good coaches and good tools help address some of the most important challenges to reinforce behaviors
- Ensure measurement approach is in place early
- A structured enablement concept allows for large scale deployment of a common framework

Thank You!

Q&A

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