Measurement in Backlog Management in O&M/Sustainment: What's Different?

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Introduction

- ## Goal: What's Different?
  - Share 12 insights

- ## Encourage discussion/
- ## questions

Waterfall
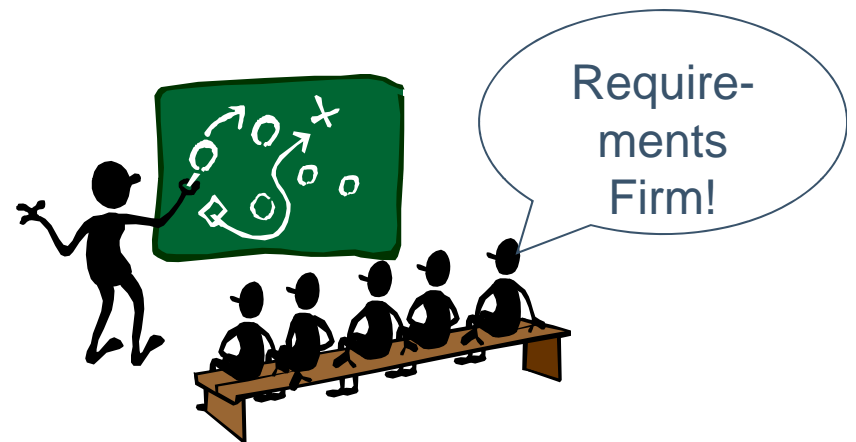
Backlog driven /Iterative

Mega-I Project

Committed to change

History

- **Critical project kicking off…**

- **Wanted iterative, backlog driven, but requirements all firm**

- **Got to be willing to collaborate to be agile. Right?**

- **Used project's real data to kick off project**

Require-ments Firm!

Two important definitions

- **Product Backlog – An ordered list of everything that might be needed in the product and is the <u>single source of requirements</u> for any changes to be made to the product.**

- **Product Owner – Responsible for the product backlog including its content and ordering. Product owner is responsible for <u>maximizing the value</u> of the product and the work of the development team**
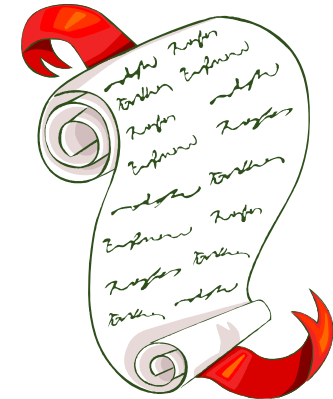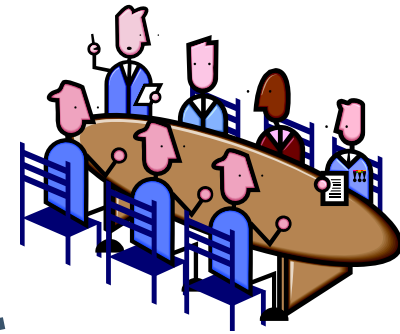
More about case study: Goals, Invest, Buckets, Allocation, Ranking

- **Two workshop groups (Grp A included product owner, Grp B included architect and lead reqts analyst)**

- **Allocated requirements to buckets**

- **Asked product owner to rank**

Brainstorm 5-10 goals

Consensus Merged

INVEST
Independent
*Negotiable*
Valuable
Estimatable
Small
Testable

Insights

- 1. Collaboration costs. You should only do it when you need to. If you have "must do" requirements, then don't collaborate on them. But definitely organize them, and prioritize them

- 2. The way we need to organize and express requirements is different (INVEST). The Backlog is the one and only one list of customer requirements.

Team
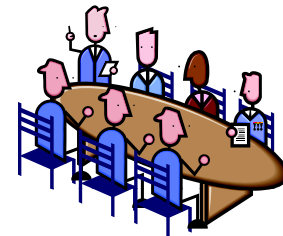
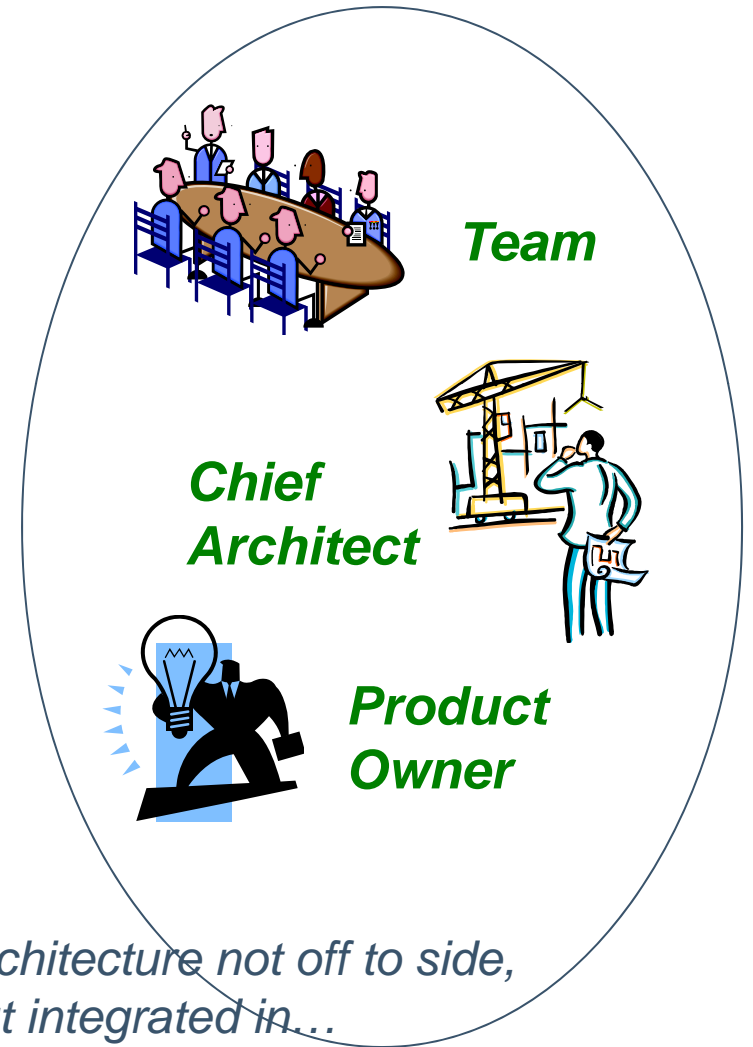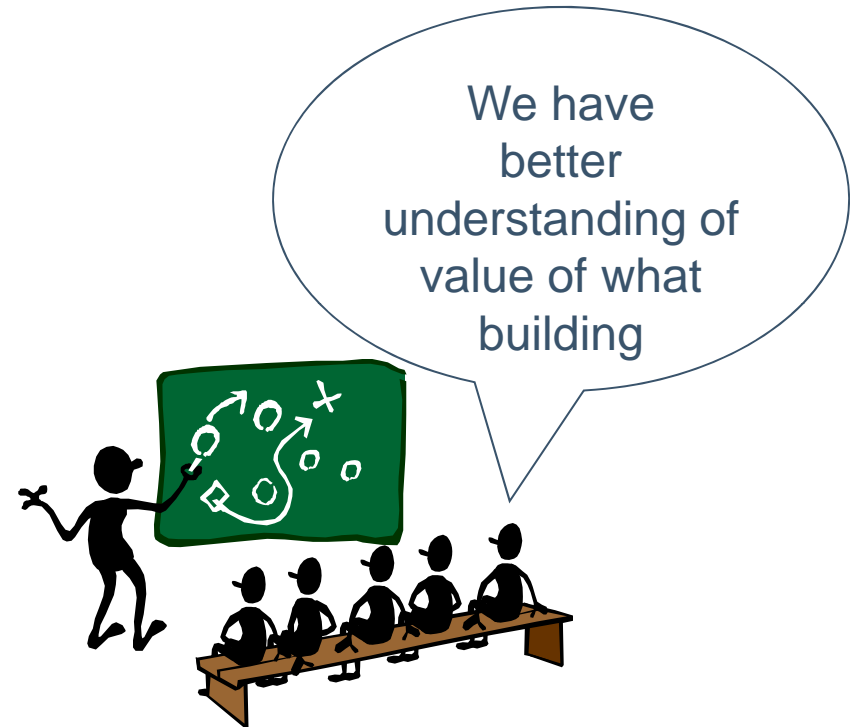*Product Backlog Modified*

Chief Architect

Insight

- **3. It is essential to have the Product Owner, the Architect, and the full development team together as we make these decisions. Full transparency is essential (everyone knows what is agreed to)**

Team

Chief Architect

Product Owner

Architecture not off to side, but integrated in…

A Question to the Team
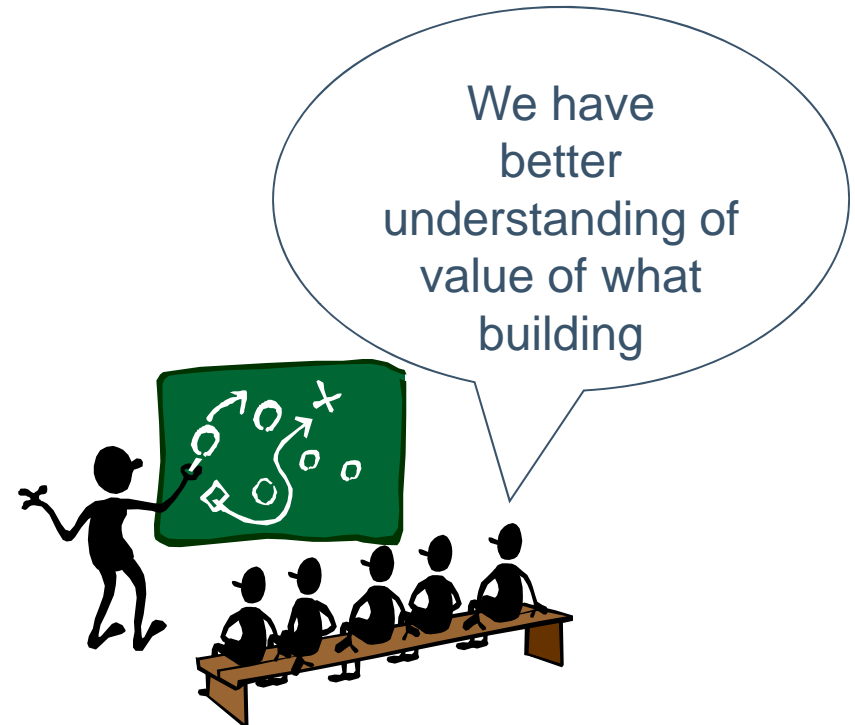
We have better understanding of value of what building

I asked team if could see value of exercise…

- **4. The team needs to understand the opportunity (or value) to the customer to help them make the best decisions during development to best support all stakeholders including operations and maintenance**

We have better understanding of value of what building

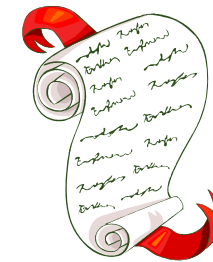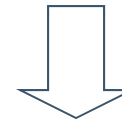*I asked team if could see value of exercise…*

Risk Management

- **Brainstormed risks, evaluated risk exposure, priority**

- **Reevaluated product backlog order based on risks**

- **Raised one product backlog item higher as result**

Risk list

Product Backlog Reordered

Note: Not introducing extra work or cost to mitigate risks…

Risk Assessment: When deciding priority of work

Focus

Business Value

(**Quick wins**) (**Tough, but necessary**)

Low Priority

Why bother?

Risk

Don't just work all high risk items first; Balance with value

Insights

- **5. With an iterative backlog driven approach risk management is not a separate distinct activity, but is integrated into the team's planning each iteration**

Team integrates risk management into iteration planning

Different from traditional risk review board approach…

- **6. We always keep a "value to the customer" ordered backlog that has been balanced with a risk assessment and "architecture first" strategy.**

Value to customer ordered backlog

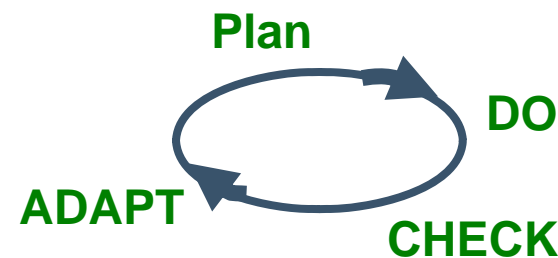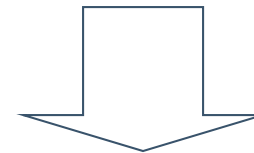*Different from traditional requirements documents…*

Insight

- **7. When you move in the lean/agile direction it affects every phase in the full life cycle from requirements through operations, maintenance and sustainment**

REQM   DESIGN   IMPL   TEST

Test not just at the end… its everywhere!

Mega-I

Plan
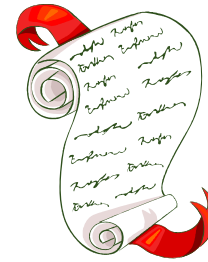
DO

ADAPT

CHECK

Also means User community representation is throughout

Insight

- **8. Need for an engaged product owner continually working all of the stakeholders he/she is representing**

Responsible for grooming the backlog

Product Owner

Ensures high risk stakeholders available for key demonstrations

How are developers, project managers and functional managers affected?

- **Development team empowered**

- **Self directed team behavior takes time.**

- **Anticipate questions from everyone on what the new expectations are**

- **Transparency means the team keeps the visible task status board up to date every day**

3 questions enough?

Do I need to call my usual status meeting?

Transparency keep task board current

Insight

- **9. When you move to self directed teams project managers become helpers, rather than driving the project top down from the master schedule.**

Project managers support team by listening and removing obstacles

Transparency

- **Young developer was having trouble…**

- **Afraid to let team know he was falling behind..**

- **Discussions led to better understanding of root cause..**

Some developers may have trouble reporting truth

Insight

- **10. Functional managers are affected too when you move toward a backlog-driven approach. Especially functional managers who have traditionally taken a strong technical role in project decisions.**

Functional managers attending team stand ups can be a conflict of interest

Role of functional managers moves more toward career growth issues…

- **11. You may think there is no room for collaboration, but as you learn more there usually is**

Previously viewed "must do" Requirements often become old implementation "how tos" that customer was used to…

Time to Market & Maturity/Quality of Product: What is different?

- **Who defines quality now?**

- **Customer defines quality now, not your internal marketing, or engineering or quality department**

- **Traditional waterfall approach leads to test and integration getting squeezed at the end**

- **But with a value prioritized backlog driven approach…**
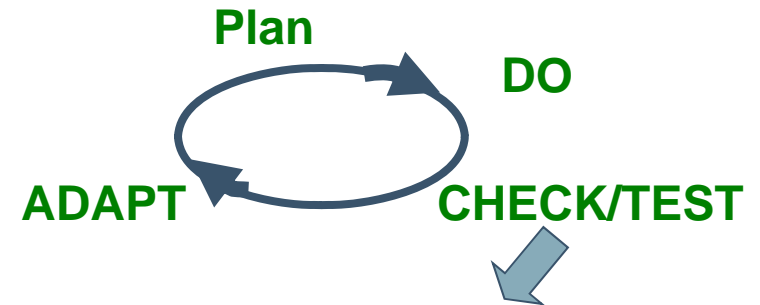
REQM   DESIGN   IMPL   TEST

Insight

- **12. Because of the way we build the backlog and create iteration plans, you can always say its time to go to market, and know you have the highest possible value to the customer, and a quality product….**

Plan

DO

ADAPT

CHECK/TEST

Always Ready To Go To Market!

Note: quality organization affected… checklists

If quality rep isn't in iteration planning meetings they won't know how to assess product

Still quality gates… but depend on situation

This is a key difference!

Conclusion

- **With backlog driven iterative approach, when pressure to get to market hits, functionality rather than quality takes hit…..**

- **You know you have most valuable functionality…not just what agreed at project start**

- **This is new commercial mind-set**
- **Way DoD should be thinking of supporting warfighter**

- **Some capabilities have higher priority than others**

OK. I see how I can use this system to help get my job done!

Perfect product late
Is dead on arrival!

Questions?

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- **Author:**
- **"*Integrating CMMI and Agile Development: Case Studies and Proven Techniques for Faster Performance Improvement*"**