The Influence of Knowledge Management on Business Value in IT Projects:
A Model and Survey Results

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  - System Development, PM Consulting/Training
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  - www.PMPerspectives.org

Recent articles on Project Mgmt

- "Innovative Practices for IT Projects"

- "Roles of the External IT Project Manager"

- "Using Classification Trees to Predict Performance in IT Projects"

- "A Temporal Model of Information Technology Project Performance"

- "The Impact of Size and Volatility on IT Project Performance"

- "Modeling the Knowledge Perspective in IT Projects"

Agenda

- **The case for a Knowledge/Business Value Approach**

- **Theoretical Model**

  - Knowledge Management

  - Knowledge Alignment

  - Impact on Business Value

- **Results of a Pilot Survey**

When is Knowledge Important?

- **Project Complexity**

- **Goal Uncertainty**

- **External Uncertainty/Volatility**

Project as Knowledge Process

- ## In a complex/uncertain IT project, everyone is sharing knowledge and acquiring new knowledge:
  - Sponsor
  - Project Manager
  - Vendors/Consultants
  - Project team members

- ## Seen through the K lens, the job of the PM is to facilitate the knowledge practices so that learning happens
  - At the right time
  - For the right price

Evidence of importance of KM

- **Executive Sponsor impact =**
  - Sponsors may lack the K to lead a project

- **Volatility impacts results**
  - Loss of K as people leave the project

- **Expertise Coordination impacts results**
  - Strong positive correlation but we don't know how

- **We fail often at learning from projects**
  - No learning in, very little out of a project

- **Knowledge of the Team**
  - When K is high, PM and Sponsors do more KM

Importance of Business Value

- **Senior PMs told us about BV**
  - *Reich & Sauer (CACM, forthcoming); Sauer & Reich (IJPM, 2008)*

- **Some academic work has been done**
  - Earned value,
  - But this doesn't get at the business value, just the attainment of targets

- **Research has not defined the construct of BV**
  - *Gemino (et al, in review)* starts this discussion
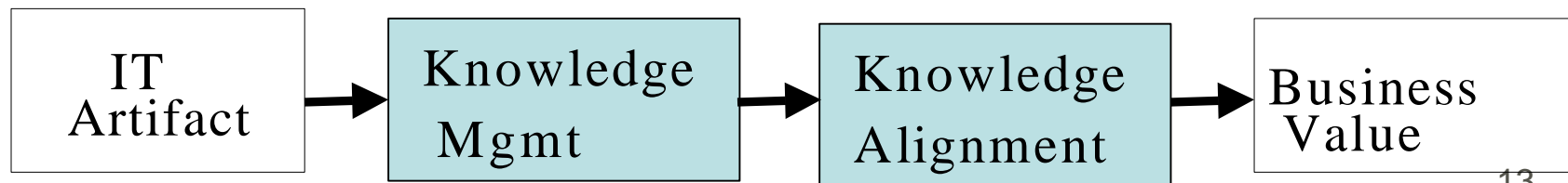
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RESEARCH MODEL

What is our goal?

- **Explore how KM may impact Business Value**

  – Recognizing that there are multiple influences on BV

- **Increase the R^2 - the ability to explain Project Performance**

Attaining Business Value

IT Artifact → Business Value

Through a KM Lens..

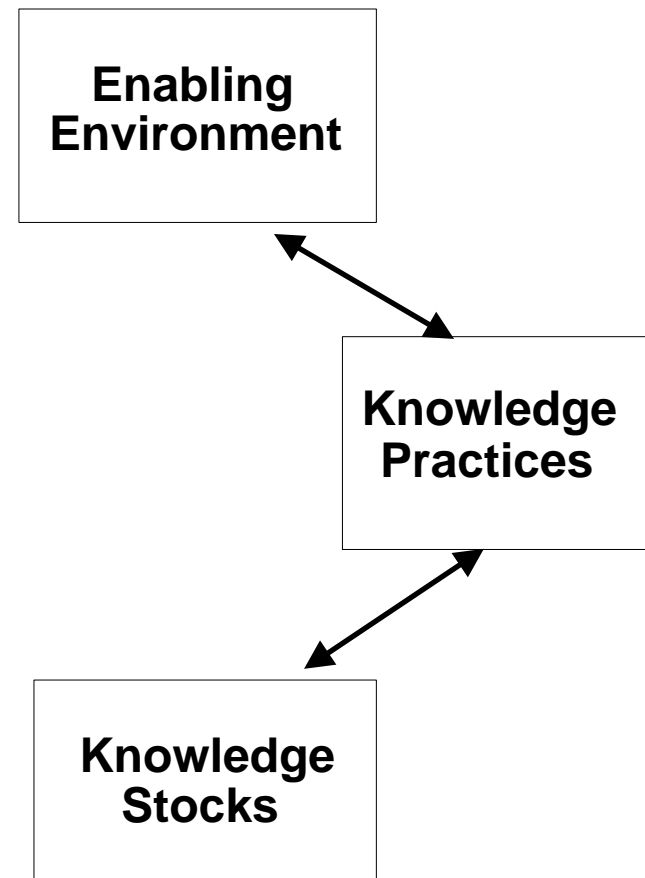IT Artifact → Knowledge Mgmt → Knowledge Alignment → Business Value

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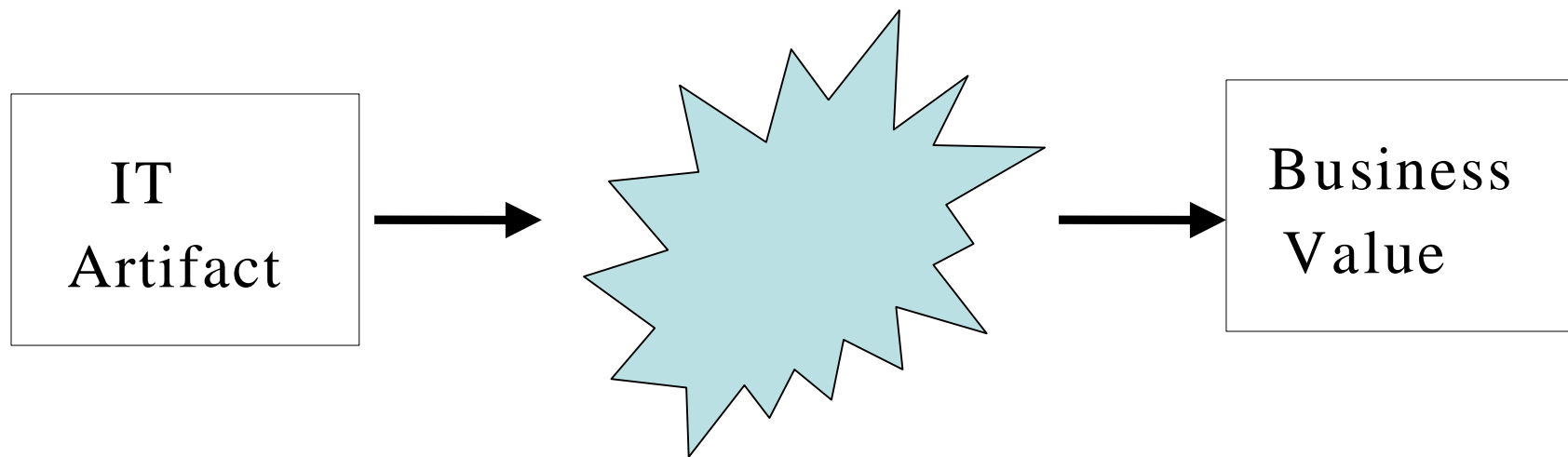
- *Using the term very very broadly….*

KNOWLEDGE MANAGEMENT

Knowledge Management

Project Managers must:

- Create the enabling environment
- Acquire and maintain the K stocks
- Manage the K practices

Enabling Environment

Knowledge Practices

**Knowledge Stocks**

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Knowledge Management

- **Enabling Environment**
  - Technological support for KM
  - Cultural support for learning and KM
  - Channels (e.g. co-location)

- **Knowledge Stock**
  - Existing K, Capacity to learn, K networks

- **Knowledge Practices**
  - Knowledge Mapping,
  - K sharing (formal and informal)
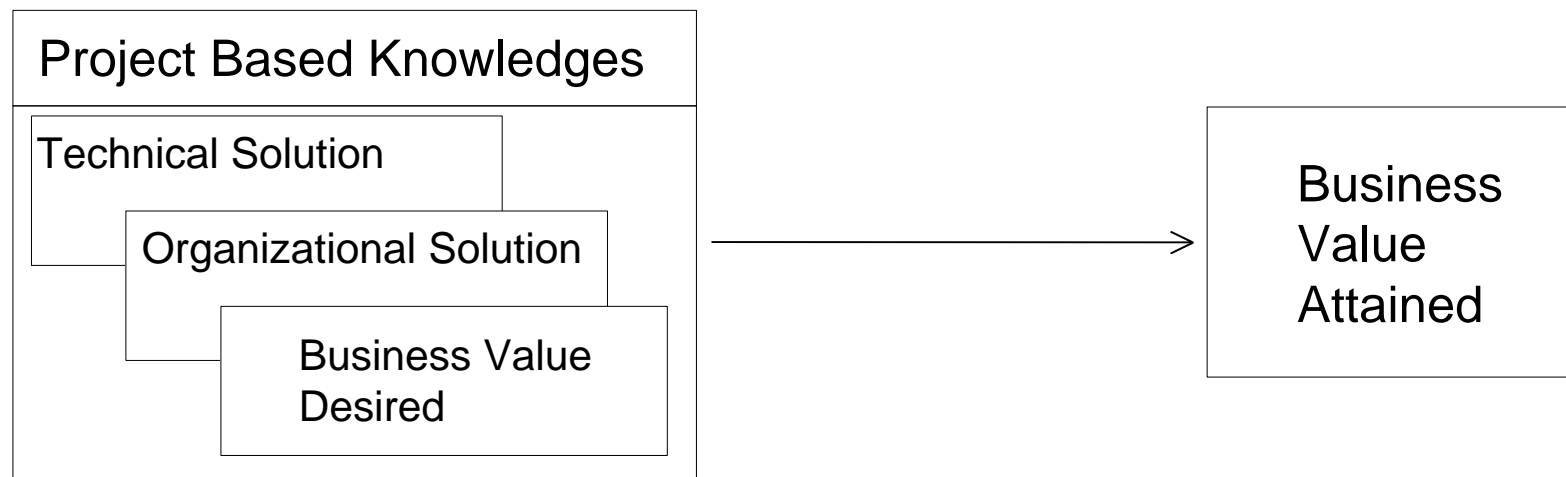 - K Risk Mgmt (backup roles, incentives)

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Connecting Knowledge Mgmt with Business Value

Knowledge Mgmt

Knowledge Alignment

Enabling Environment

Knowledge Practices

Knowledge Stocks

Business Value Attained

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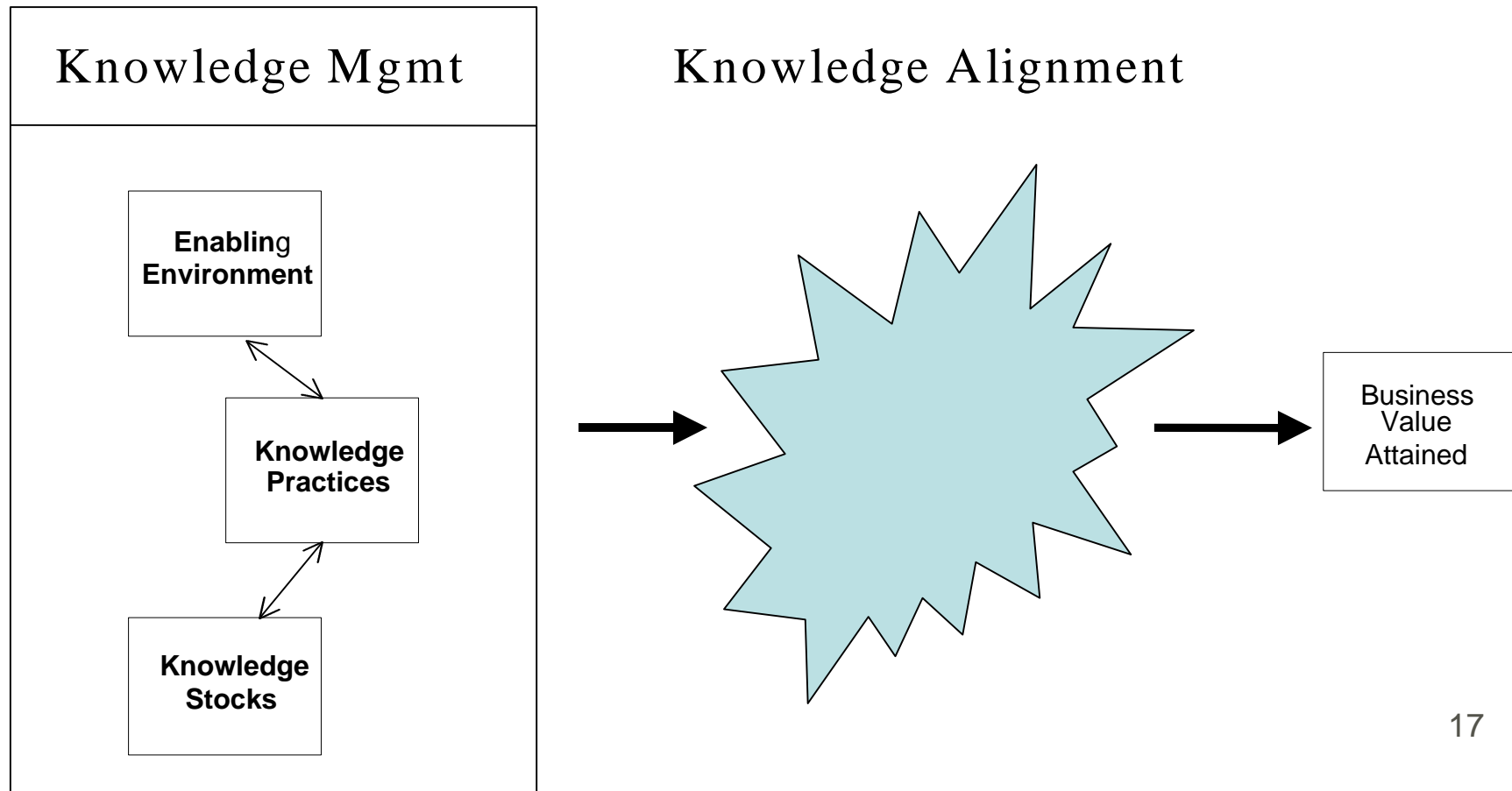
KNOWLEDGE ALIGNMENT

Three Types of Knowledge

Project Based Knowledges

Technical Solution

Organizational Solution

Business Value Desired
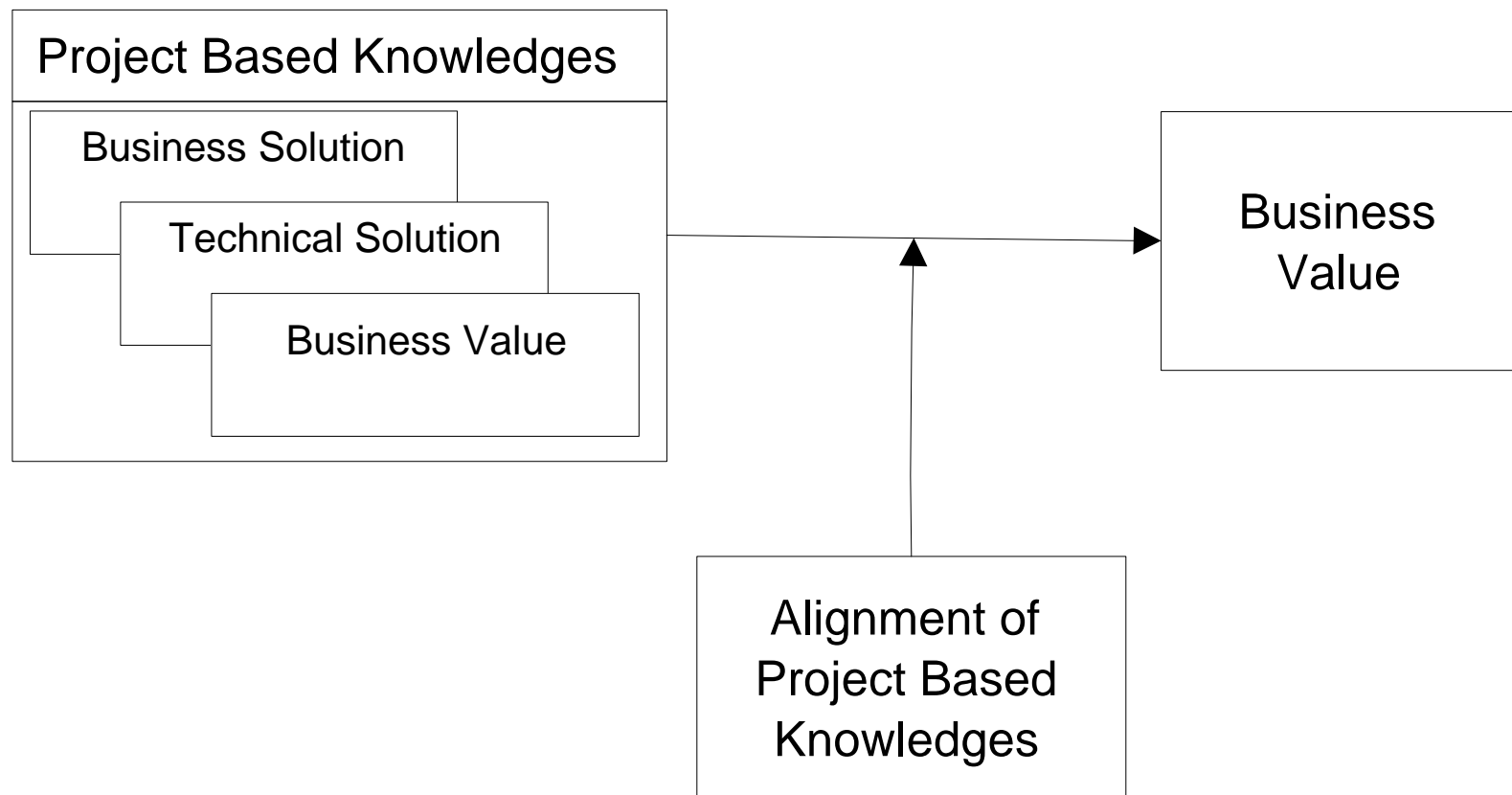
→ Business Value Attained

Why Separate Knowledges?

- Publications are largely focused on the technical solution K

- We are pushing beyond targets to BV

- The 3 knowledges are largely developed by different "teams"
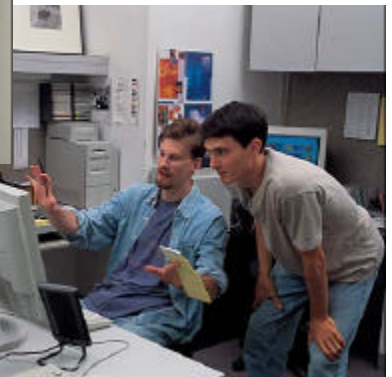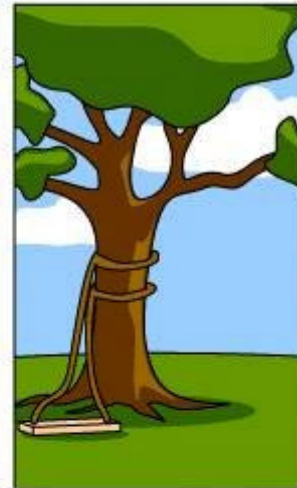
Alignment of Knowledges

How the customer explained it
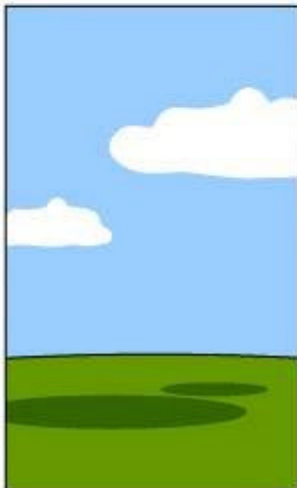
How the Project Leader understood it
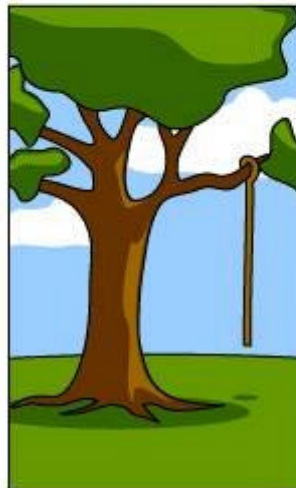
How the Analyst designed it

How the Programmer wrote it
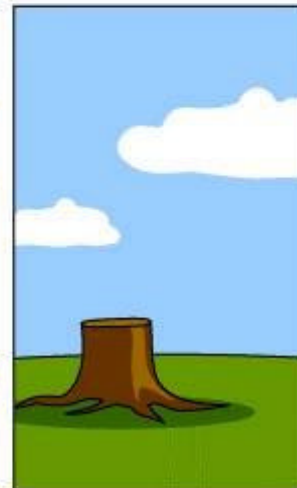
How the Business Consultant described it

How the project was documented

What operations installed

How the customer was billed

How it was supported

What the customer really needed

Aligning Knowledges

Impact of KM on Business Value

Enabling Environment

Knowledge Practices

Knowledge Stocks

Knowledge Management

Project Based Knowledges

Technical Solution

Organizational Solution

Business Value Desired

Alignment of Project Based Knowledges

Business Value Attained

Knowledge Alignment

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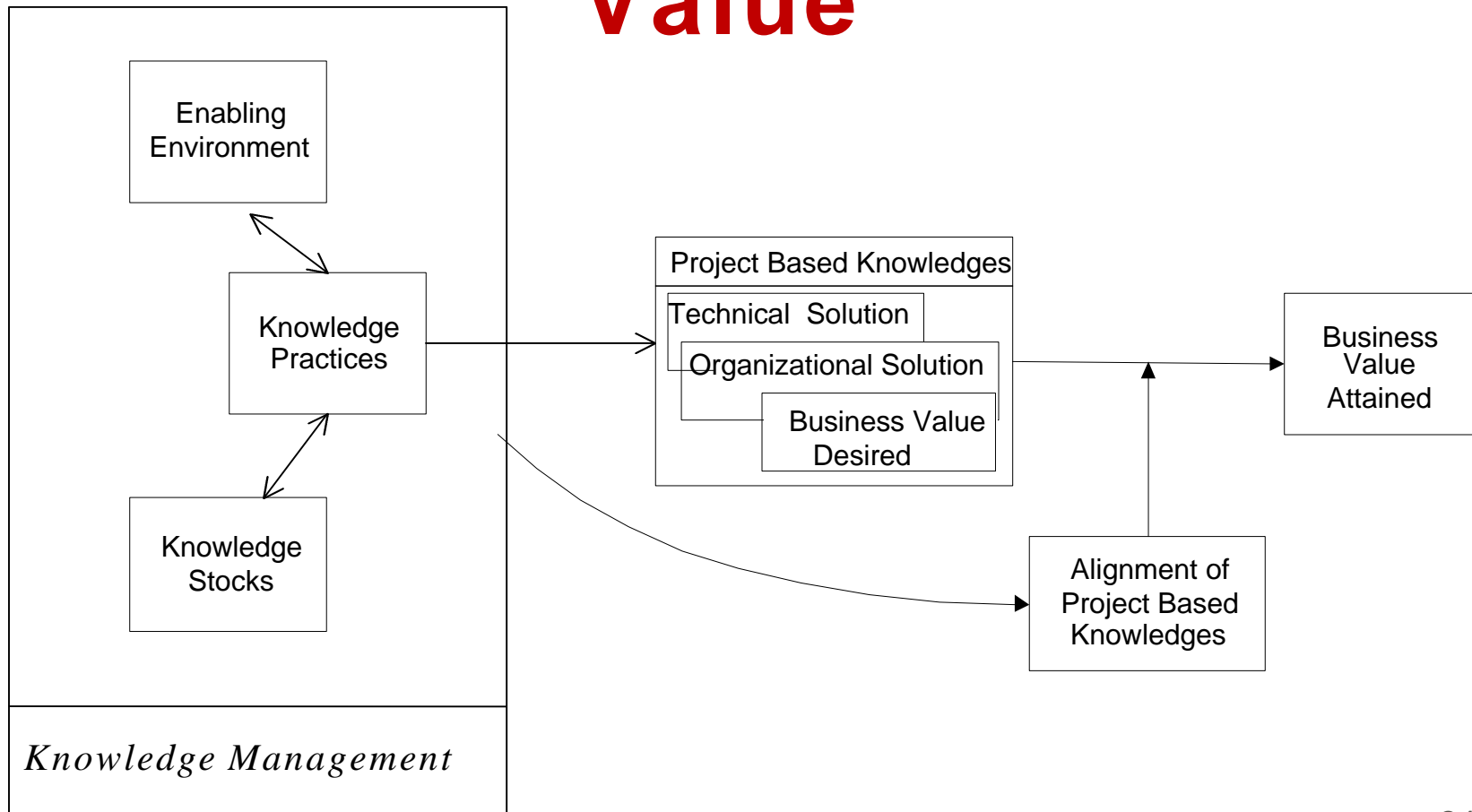
How is Business Value Attained?

- **Individual "solutions" are of high quality because of a KM focus**
  - Negotiated, shared, externalized and actionable,

- **Solutions stay synchronized throughout the project**
  - Enabling smoother monitoring and realization

YOUR COMMENTS?

PILOT SURVEY RESULTS

The Survey – Process

- **Items to measure each model element**

- **Items to identify project and PM types**

- **Designed survey**

- **5 PMs "beta tested" a paper copy**

- **Made changes based on their feedback**
  - Adding BU focus

- **Asked Society of PMPs and ISSIG of PMI to pilot**

Survey demographics

- N = 25

- **Averages with (and without) outlier**
  - Duration 19.5 mo, (15.2)
  - Budget $22.7M ($1.1M)
  - 261 person months (48)
  - 8 IT people, 11 business people on team

- **Majority were in-house, custom builds**

Knowledge Stock Test

Construct	Variable	Sig.
Knowledge Stock	IT Team Knowledge 3 items)	Not Sig.
	Business Team Knowledge (3 items)	Not Sig.
	Governance Team Knowledge (3 items)	Not Sig.
	External Network (2 items)	Not Sig.
	Absorptive Capacity (2 items)	**Significant**
	Previous Collaboration (3 items)	Not Sig.

Enabling Environment Test

Construct	Variable	Significance
Enabling Environment	Governance Team Promotion of Learning Environment (1 item)	Not Sig.
	Project Team Knowledge and Learning Orientation (1 item)	**Significant**
	Co-Location (4 items)	Not Sig.
	Technology (2 items)	Not Sig.

Knowledge Practices Test

Construct	Variable	Significance
Knowledge Practices	IT Team Expertise Coordination (3 items)	Not Sig.
	Business Team Expertise Coordination (3 items)	Not Sig.
	Cross-Team Expertise Coordination (5 items)	Not Sig.
	Formal Knowledge Practices (4 items)	Not Sig.
	Cross-Team Knowledge Sharing (2 items)	**Significant**
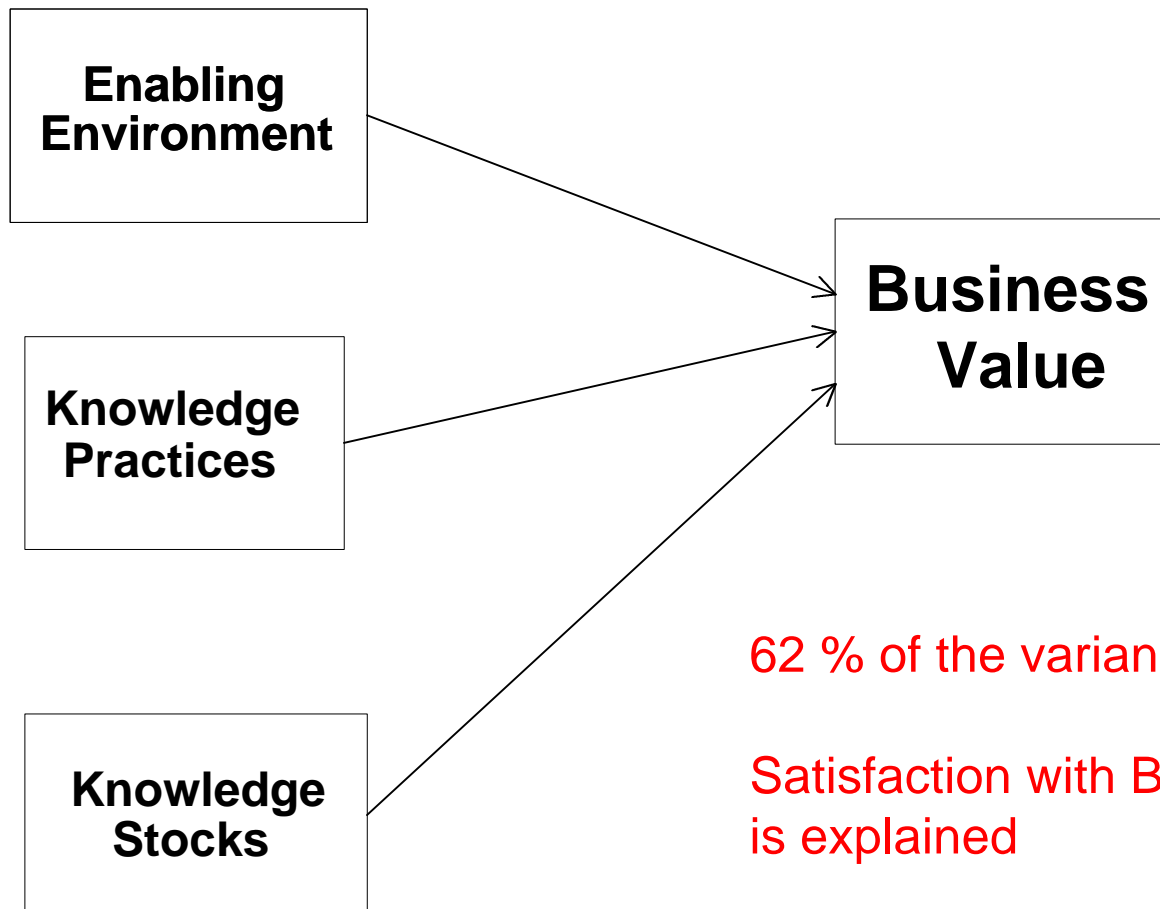
A Conclusion

- **Expertise does not matter to BV**

- **The "lifecycle" matters:**

  - Hire those willing to Learn and Share

  - Develop a Learning Culture

    - Try, learn, share

  - Create Knowledge Sharing Opportunities

    - Meetings, status reports, social gatherings)

Our Questions To You

- **How do you identify people who are willing to learn and share K?**

- **How have you developed a Learning Environment across the team?**

- **How have you created opportunities for K sharing ?**

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Other Questions

- **Organizational Change Plan**
  - What does it look like?
    - What templates do you use
  - When do you create it?
  - How to tell if it will deliver BV?

- **Alignment of Knowledge**
  - How can you keep Org Change Plan and BV and Tech Design in synch? Issues?
  - Does it make a difference?

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Thanks !

*Presentation to Society of PM
Professionals Feb 2010*