

Implementing Kanban

from shallow to deep, value all the way down

Each of 6 Kanban practices can be implemented with different levels of rigor & maturity

Devlin
Linkoping, March 2013



What is the Kanban Method?

Kanban Method

A management & cultural approach to improvement

View creative knowledge work as a set of services

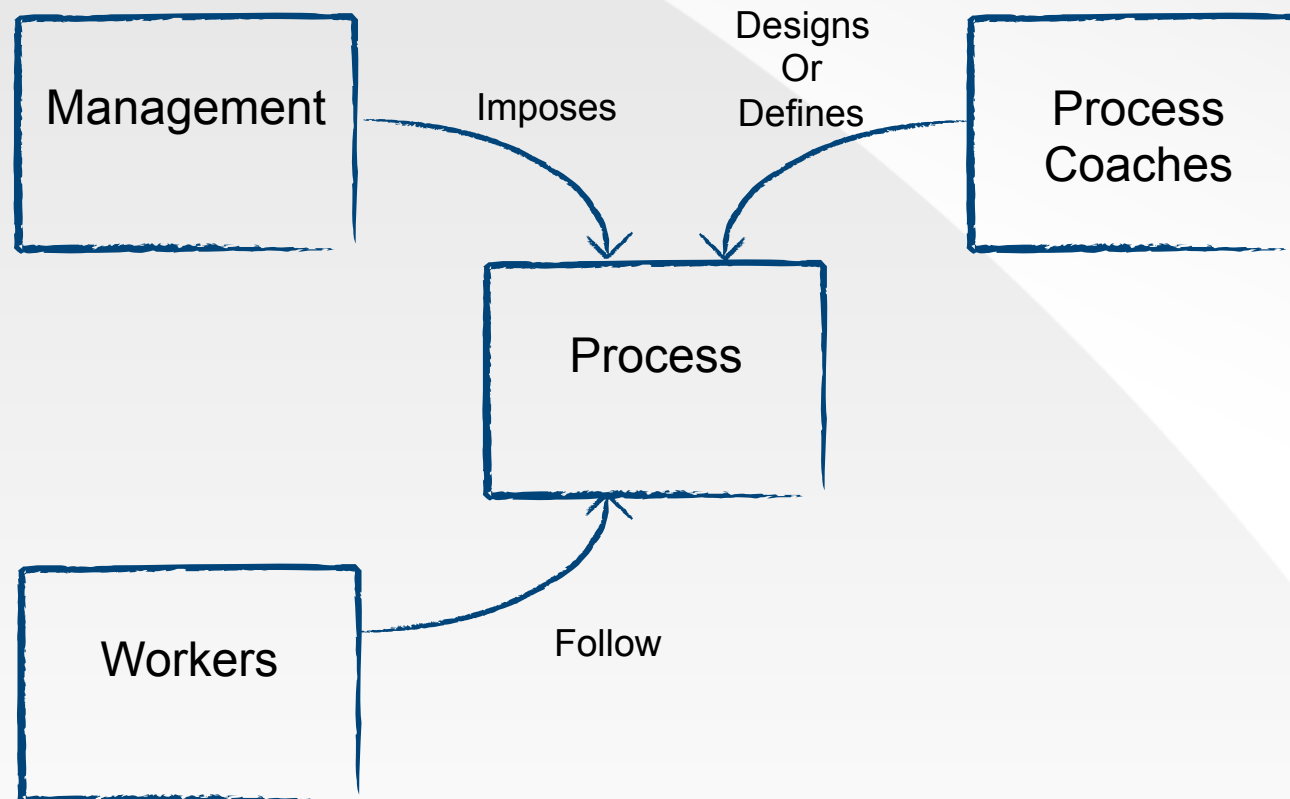
Encourages a management focus on demand, business risks in, and capability of each service to supply against that, demand

The Kanban Method is not...

A project management or software development lifecycle process

Nor, does it encourage a process-centric approach to improvement!

Don't do this!...



Kanban Method

Uses visualization of invisible work and virtual kanban systems

Installs evolutionary “DNA” in your organization

Enables adaptability to respond successfully to changes in your business environment

6 Practices for Evolutionary DNA

The Generalized Version

Visualize

Limit Work-in-progress

Manage Flow

Make Policies Explicit

Implement Feedback Loops

Improve Collaboratively, Evolve Experimentally
(using models & the scientific method)

Assessing Kanban Implementations

Are we doing Kanban or not?

It isn't a question of evaluating practice usage but rather a question of intent?

Do you intend to use visualization & virtual kanban systems as a core driver of a culture of continuous improvement?

Do you view your organization as a network of service-oriented workflows and seek to improve the balance of capability against demand?

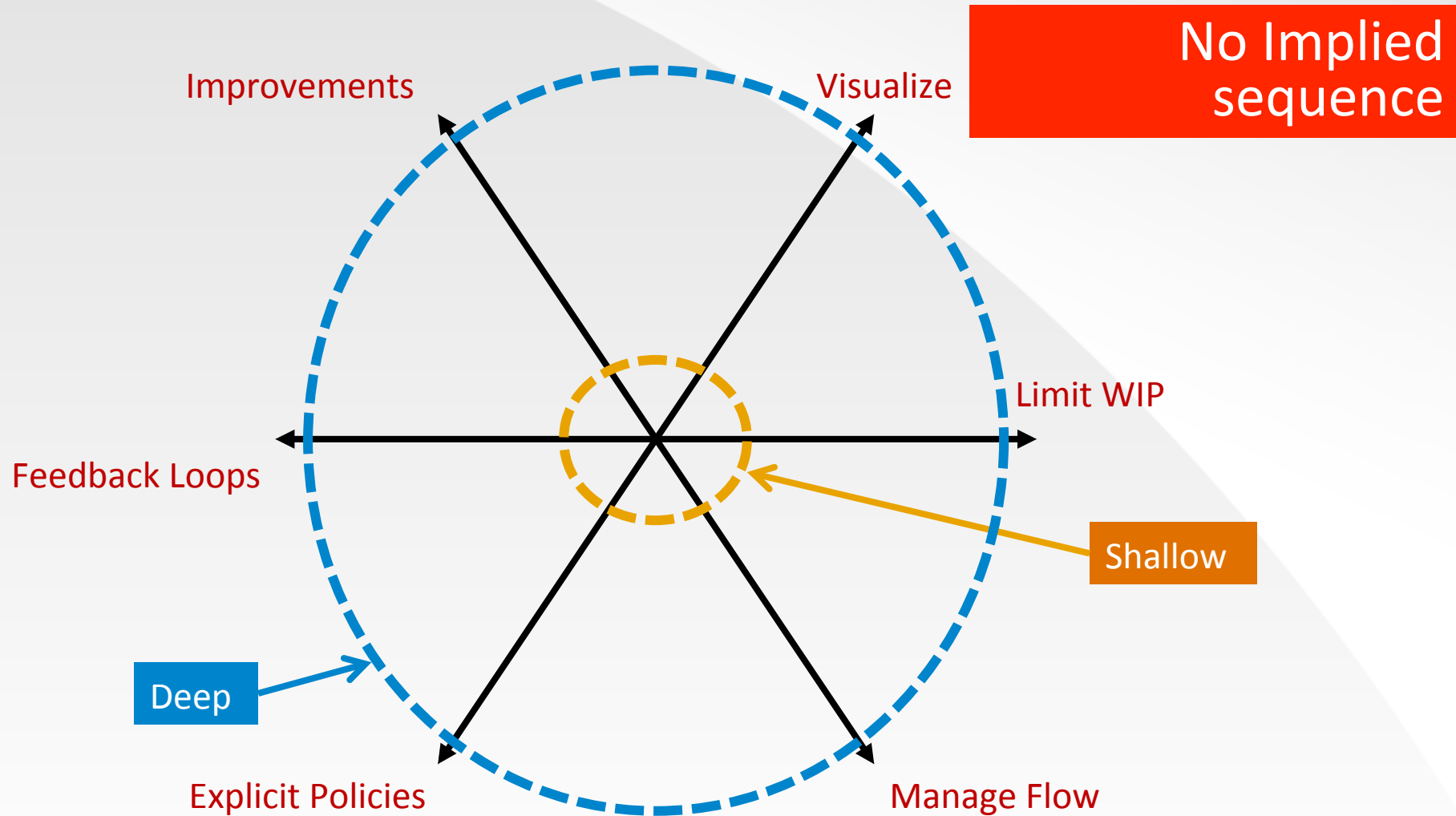
If the intent is there, then the question should be....

How Deep is your Kanban?

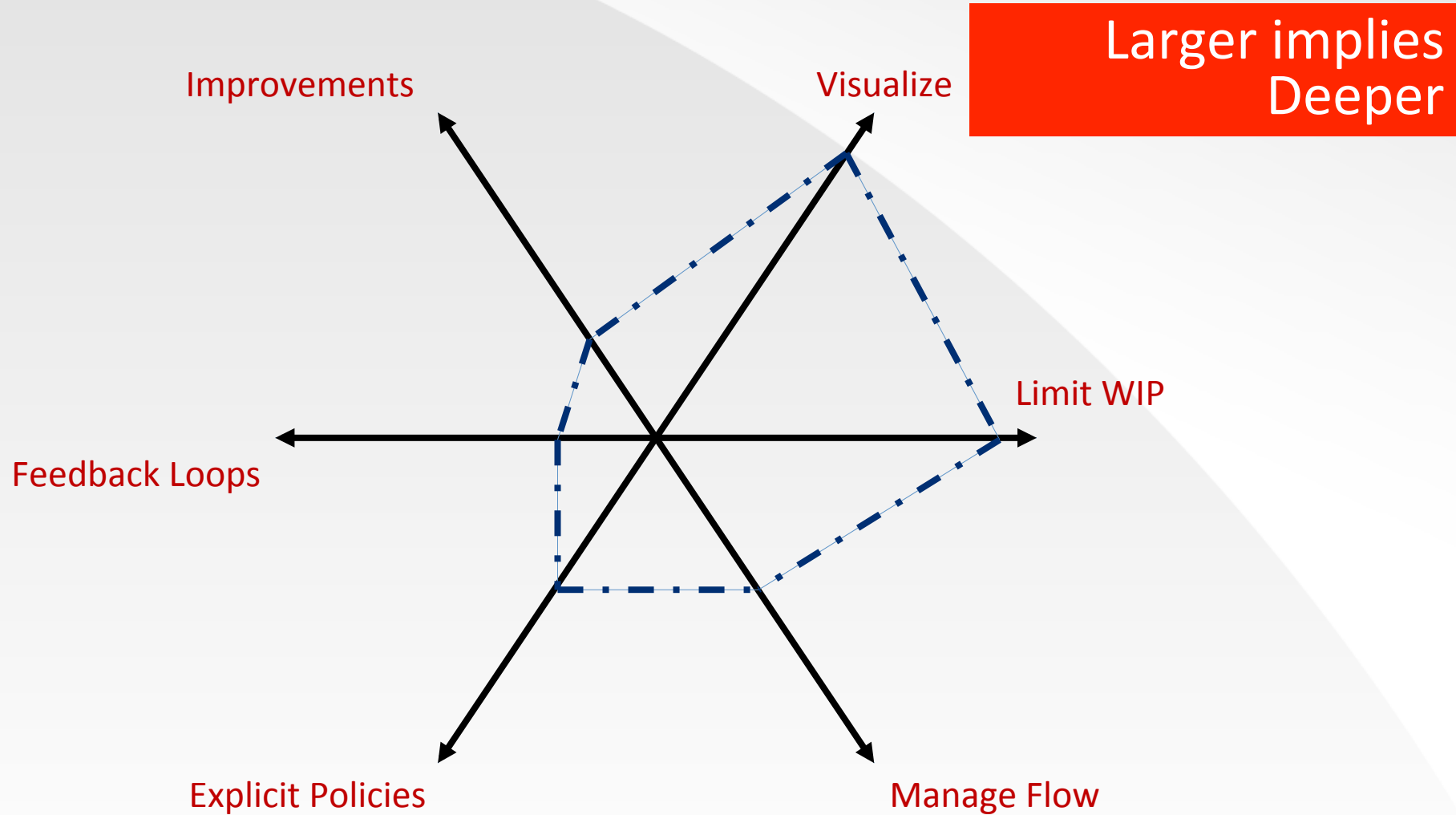


Visualize
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Manage Flow
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In reality it isn't so easy, practice adoption isn't linear nor does it follow a predictable sequence



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**This raises the question, how do we put
a scale on the six axes?**

Visualize

- Work
- Different Work Item Types
- Workflow
- Kanban Limits
- Ready for pull ("done")
- Blocking issues (special cause variations)
- Capacity Allocation
- Metrics-related aspects such as - lead time, local cycle time, SLA target
- Inter-work item dependency (incl hierarchical, parent-child dependency)
- Inter-workflow dependency
- Other risk dimensions - cost of delay (function shape & order of magnitude), technical risk, market risk

Limit WIP

- Deferred commitment & dynamic staff assignment (no WIP limits) aka “last responsible moment”
- **Proto-kanban**
 - personal kanban
 - **WIP limit per person**
 - workflow with infinite limits on "done" queues
- **Single workflow full pull system with WIP limits**
- Multiple interdependent workflows with pull system

Manage Flow

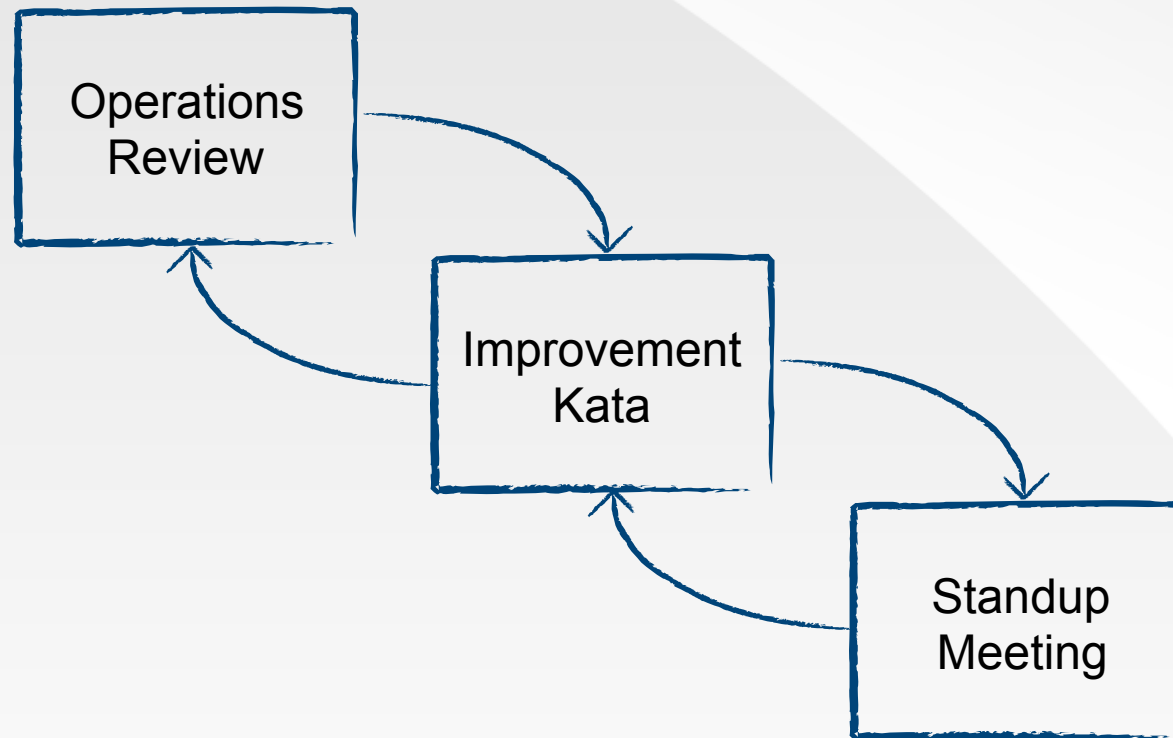
- Daily meetings
- Cumulative Flow Diagrams
- Delivery rate (velocity/throughput) control chart
- SLA or lead time target
- Flexible staff allocation or swarming behavior
- Deferred pull decisions, or dynamic prioritization
- Metrics for assessing flow such as number of days blocked, lead time efficiency

Make Policies Explicit

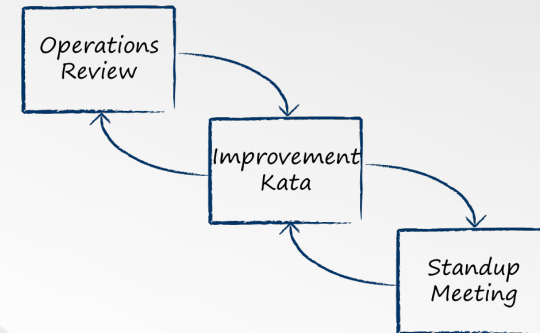
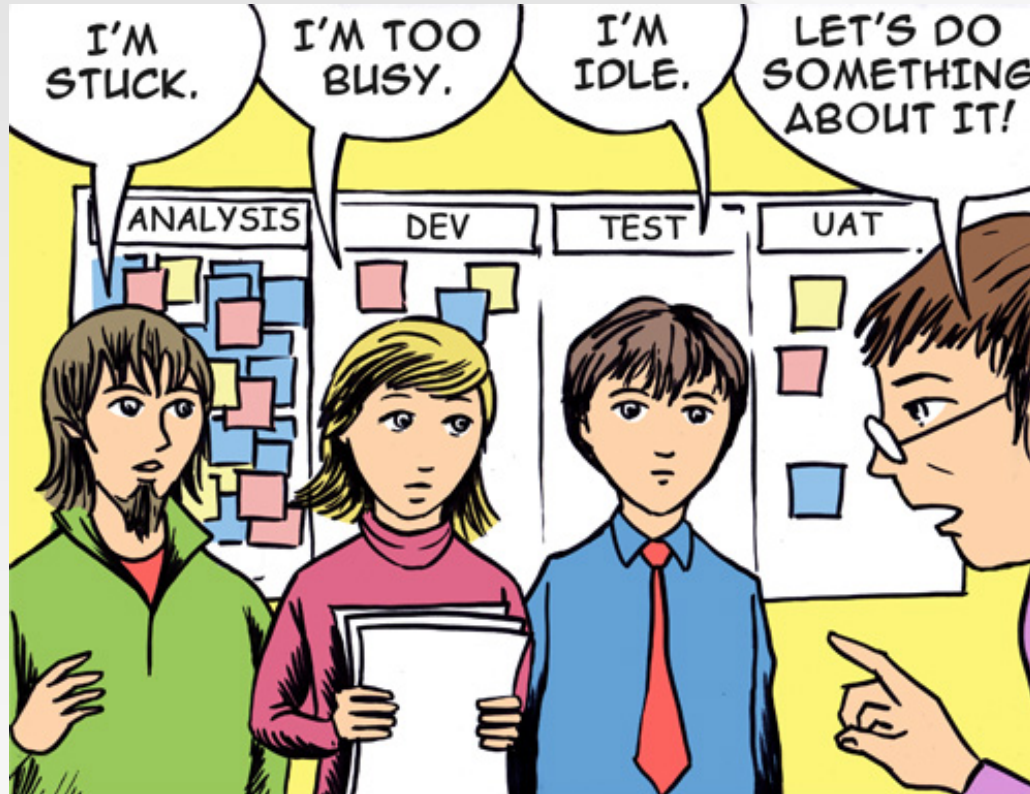
- Workflow/Kanban System policies explicit
 - Pull criteria (definition of done, exit criteria)
 - Capacity allocation
 - Queue replenishment
 - Classes of service
- Staff allocation / work assignments
- Explicit over-ride and modify authority
- More?...

Feedback Loops

The Kanban Kata



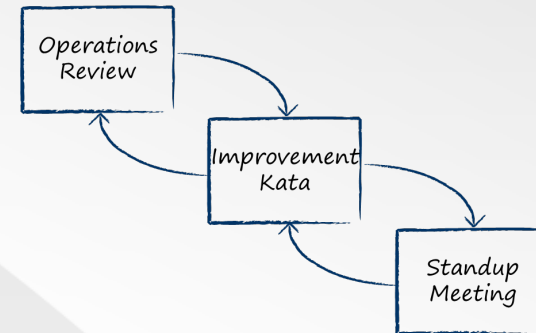
Standup Meeting



Disciplined conduct and acts of leadership lead to improvement opportunities

Kaizen events happen at ***after meetings***

Improvement Kata



A mentor-mentee relationship

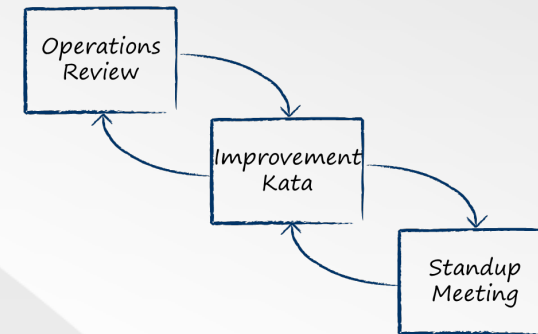
Usually (but not always) between a superior and a sub-ordinate

A focused discussion about system capability

Definition of target conditions

Discussion of counter-measures – actions taken to improve capability

Operations Review



Meet monthly

Disciplined review of demand and capability for each kanban system

Provides system of systems view and understanding

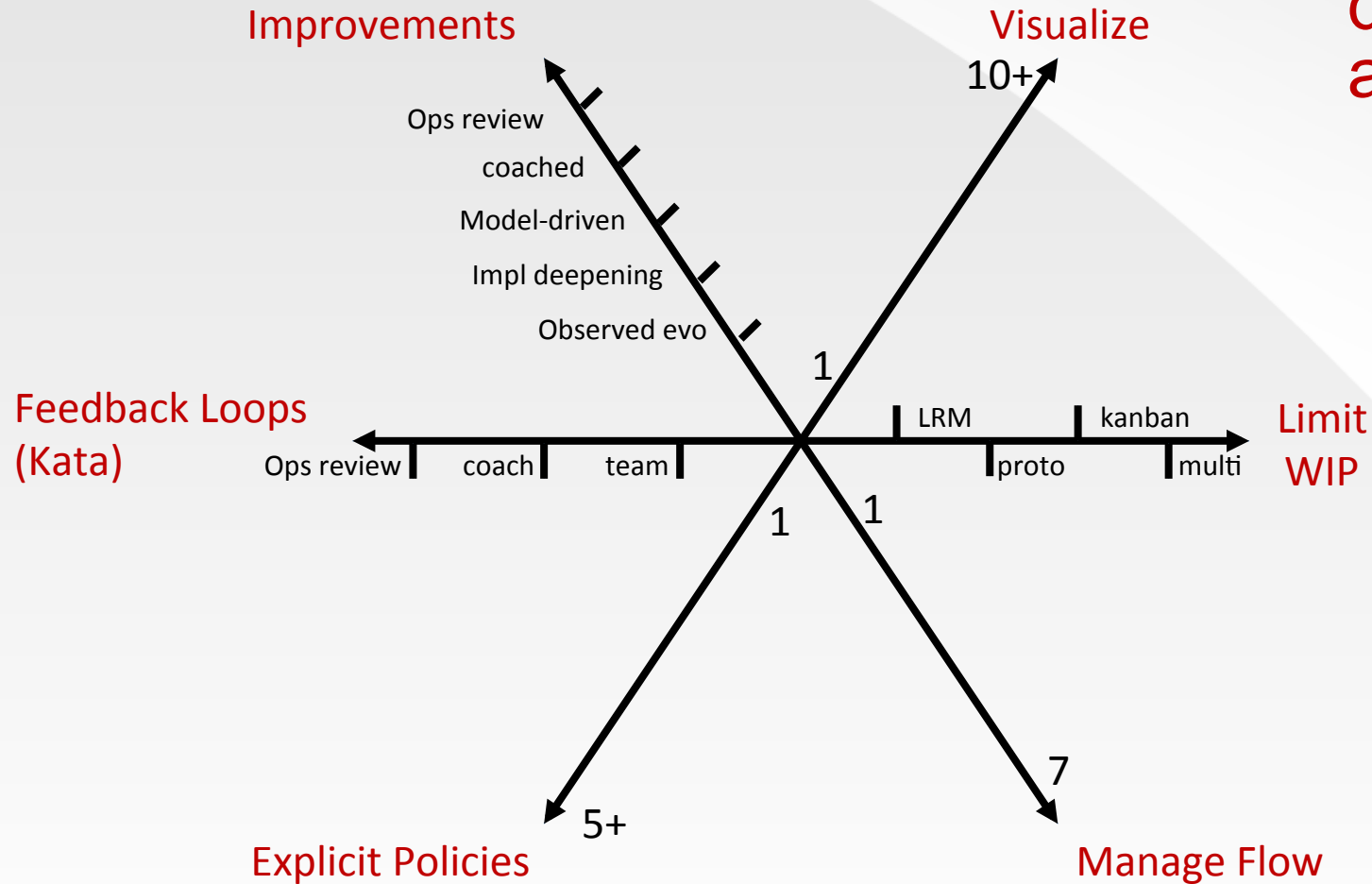
Kaizen events suggested by attendees

Improve collaboratively, evolve experimentally (using models & scientific method)

- Evidence of local process evolution - changes to workflow, policies, WIP limits
- Evidence of increasing depth of Kanban implementation on other 5 practices
- Evidence that process evolution was model-driven - use of metrics, identification of bottlenecks, common/special cause variation, transaction/coordination costs, other models not specified in current literature
- Evidence of process or management policy evolution as a result of mentor-mentee relationship
- Evidence of inter-workflow process or management policy evolution as a result of operations review

Map evaluation criteria onto chart

Allows multi-dimensional assessment



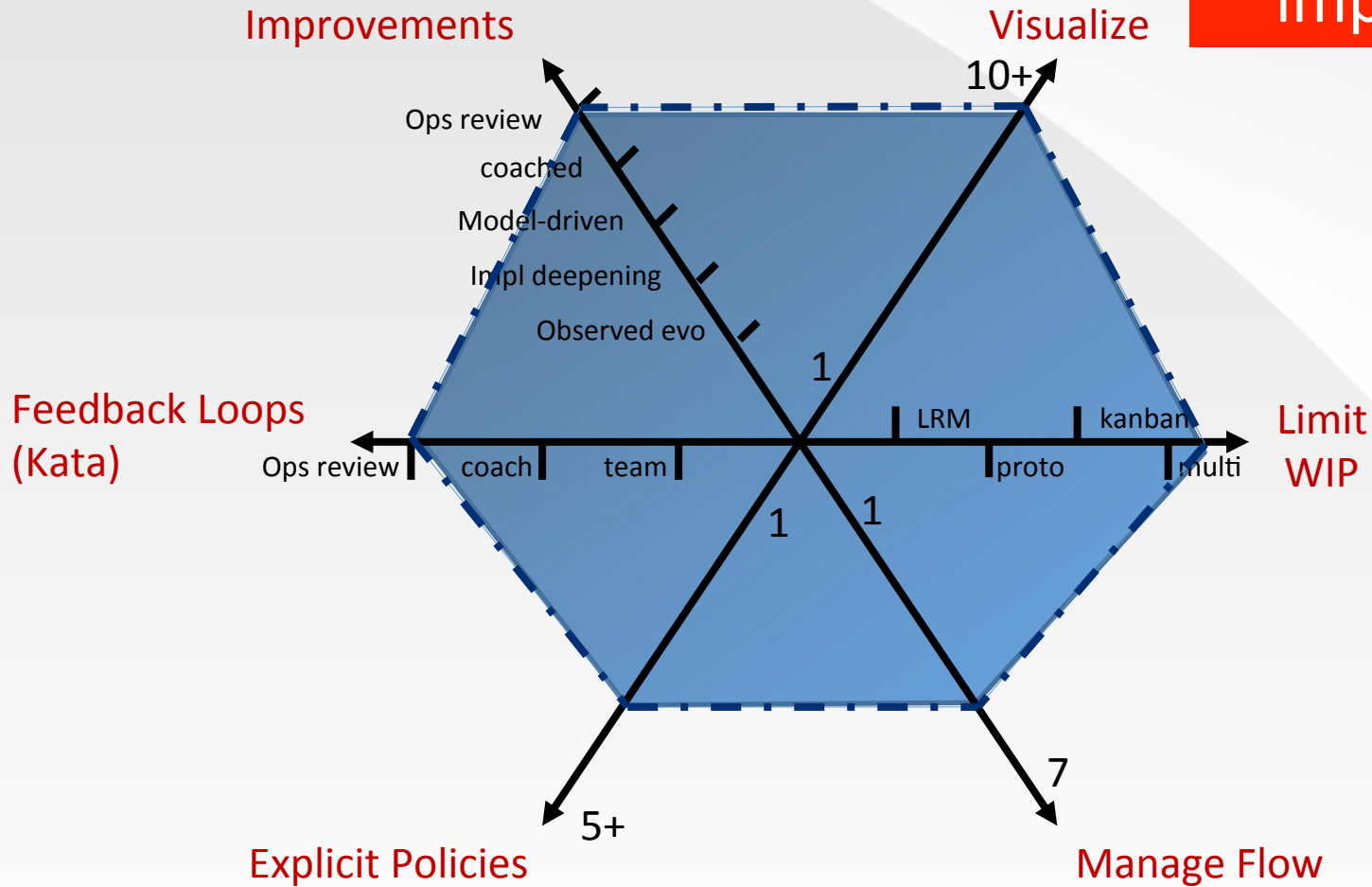
We can now map known Kanban case studies onto this framework for assessment



Corbis from 2007

Corbis IT department circa October 2007

Very deep implementation

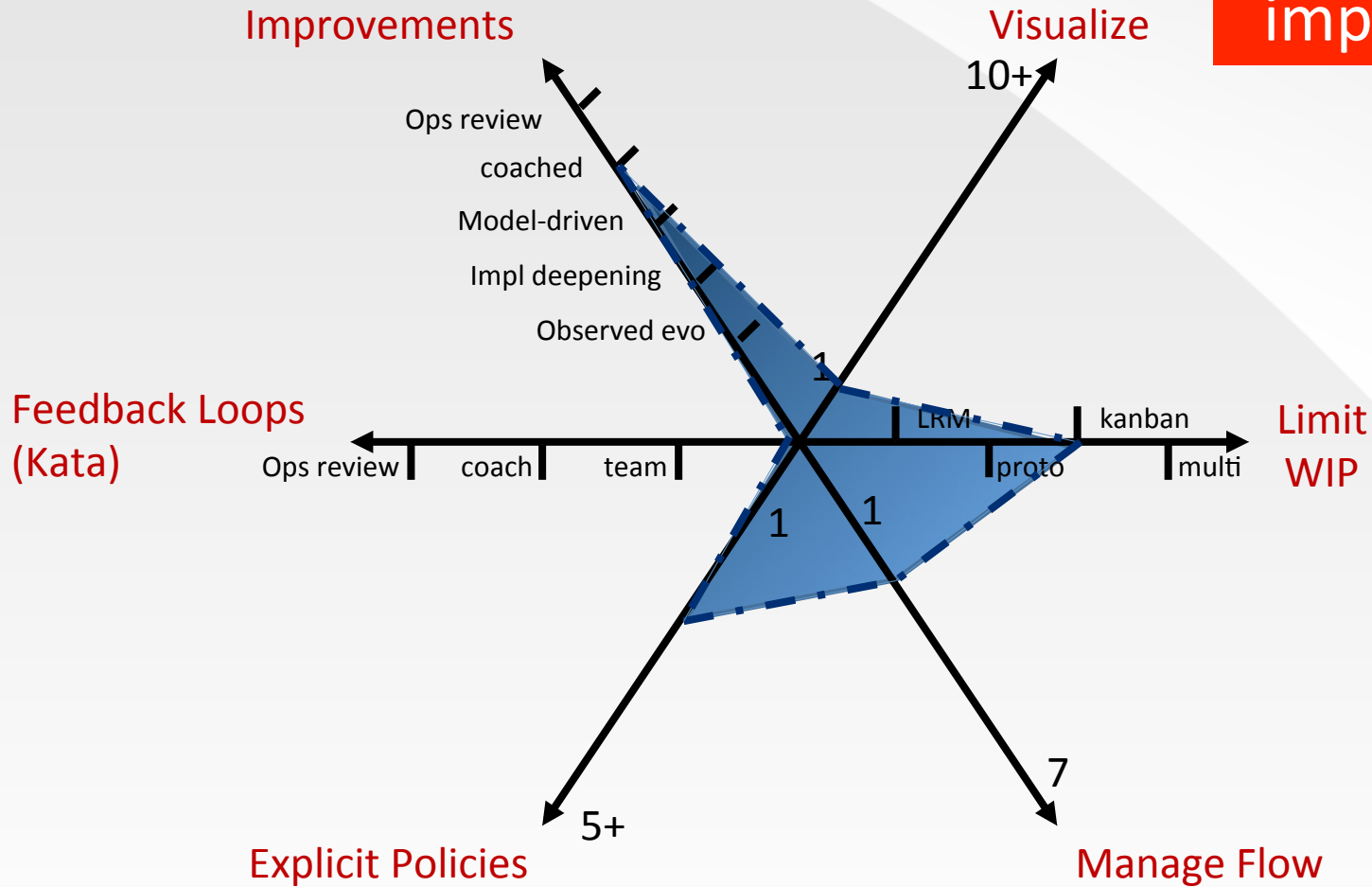


XIT Microsoft 2005



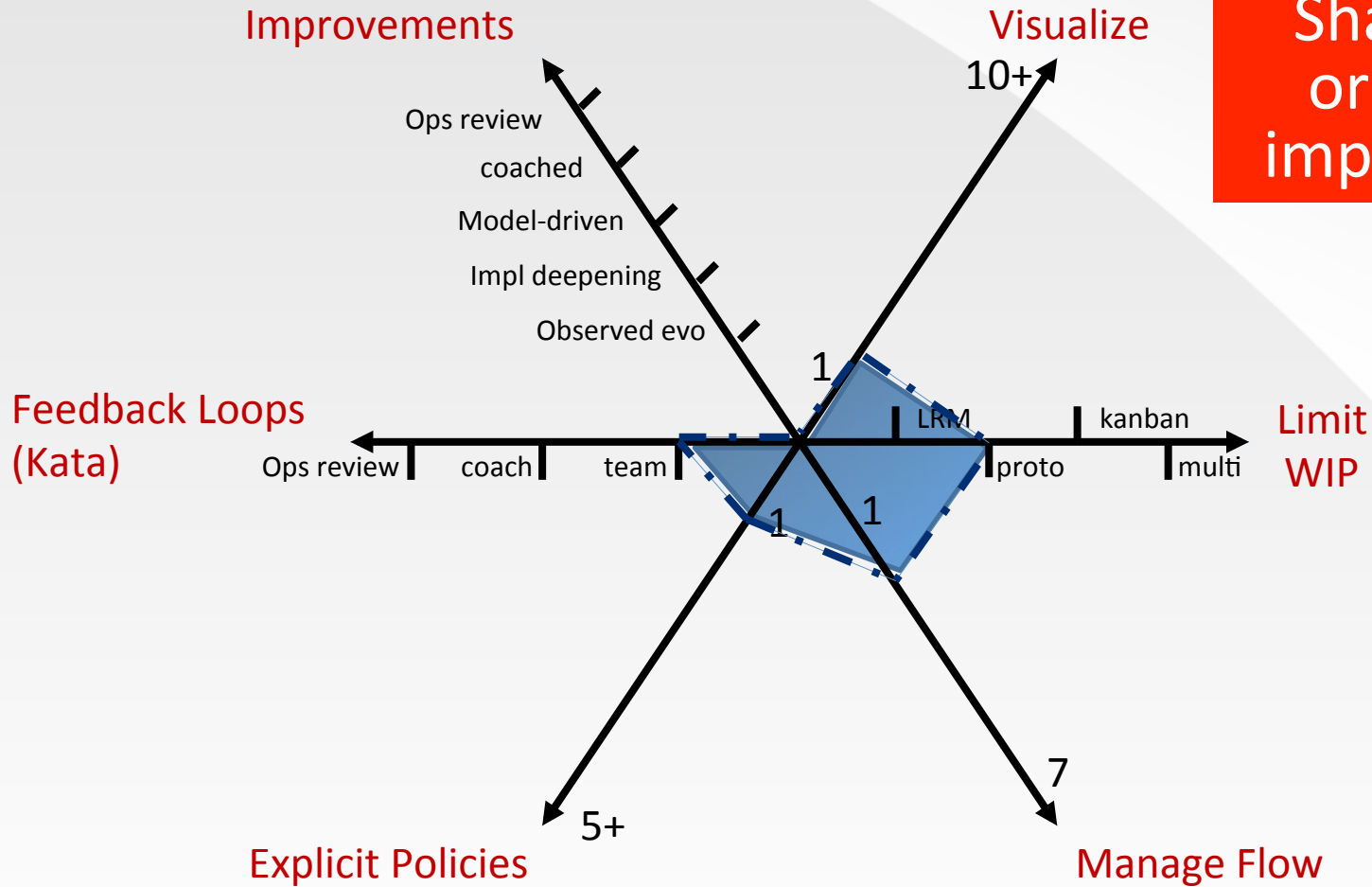
XIT Microsoft 2005

Much shallower early implementation



A Typical Proto-Kanban Implementation

Very shallow
Shallower than
original (2005)
implementation



**Increasing depth, increasing
benefits**

A Typical Proto-Kanban Implementation

Very shallow

Benefits

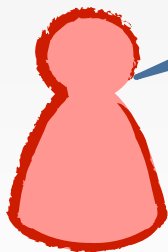
Transparency
Engage people emotionally
Collaboration
Greater empathy
Reduced multitasking

Improve

Feedback Loops
(Kata)

Ops review

Limit
WIP



Explicit Policies

5+

7

Manage Flow

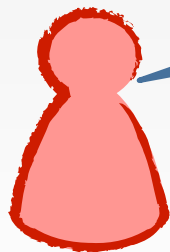
XIT Microsoft 2005

A little Deeper

Benefits

Predictability
Shorter Lead Times
Increased Throughput
**Improved trust with
business stakeholders**
Eliminated Disruptions
Measurable Benefits

Limit
WIP



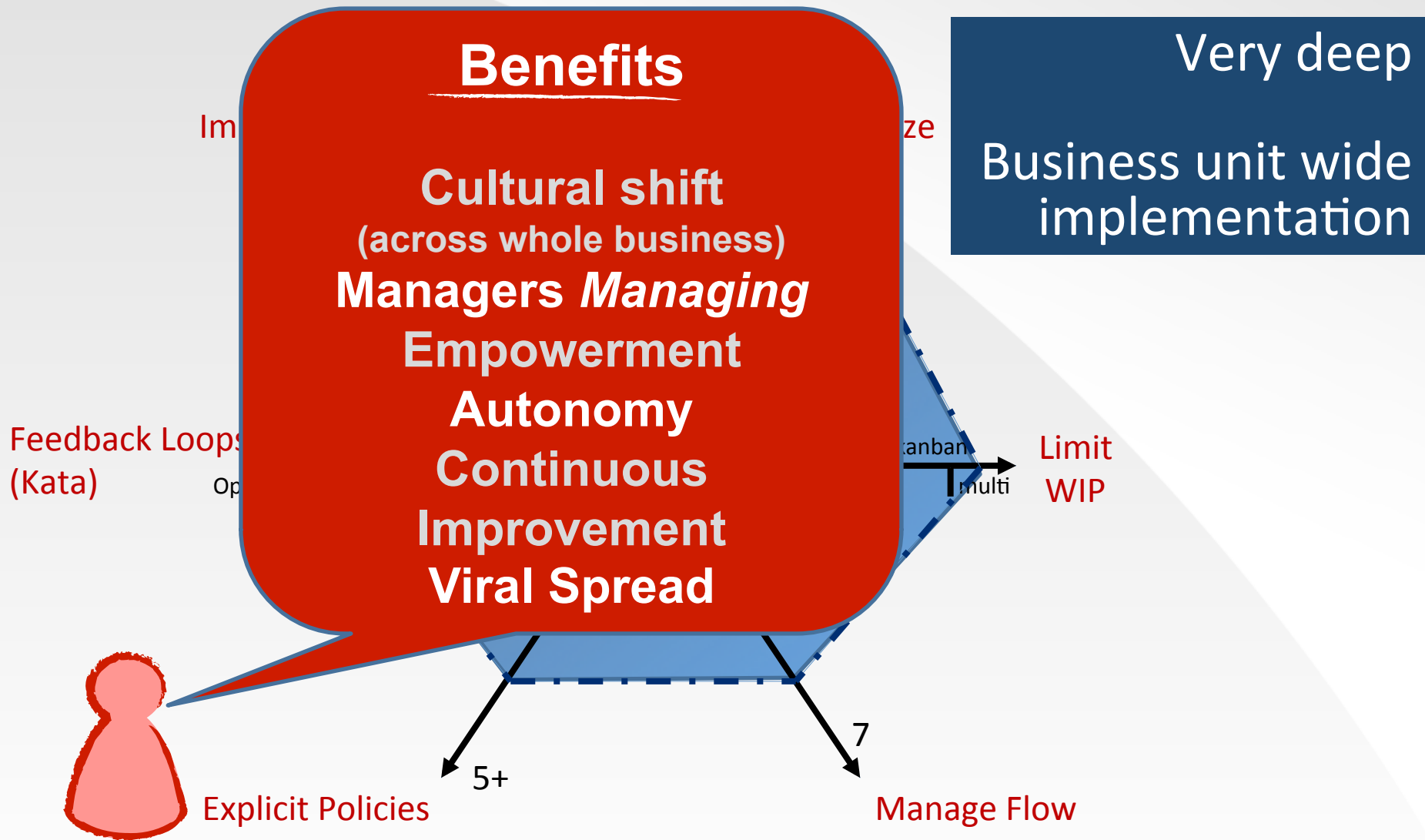
Explicit Policies

5+

7

Manage Flow

Corbis IT department circa October 2007



6 Practices for Evolutionary DNA

The More Specific Version

Visualize work, workflow & business risks

(using large physical or electronic boards in communal spaces)

Implement Virtual Kanban Systems

Manage Flow

Make Policies Explicit

Implement Kanban Kata

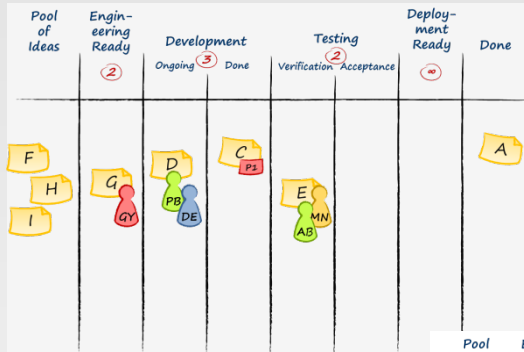
Educate your workforce to enable collaborative evolution of policies & ways of working

based on models of workflow from bodies of knowledge such as Theory of Constraints, Deming's Profound Knowledge, Lean, Risk Management such as Option Theory

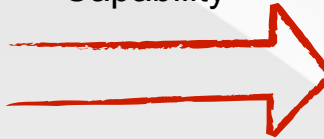
Scaling out across an organization

Treat each service separately

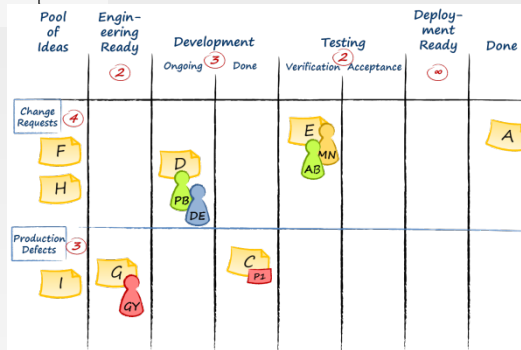
Demand



Observed Capability



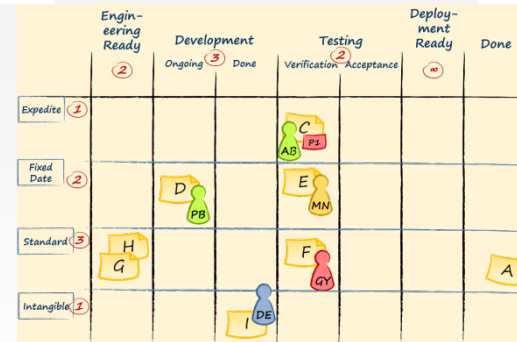
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Observed Capability



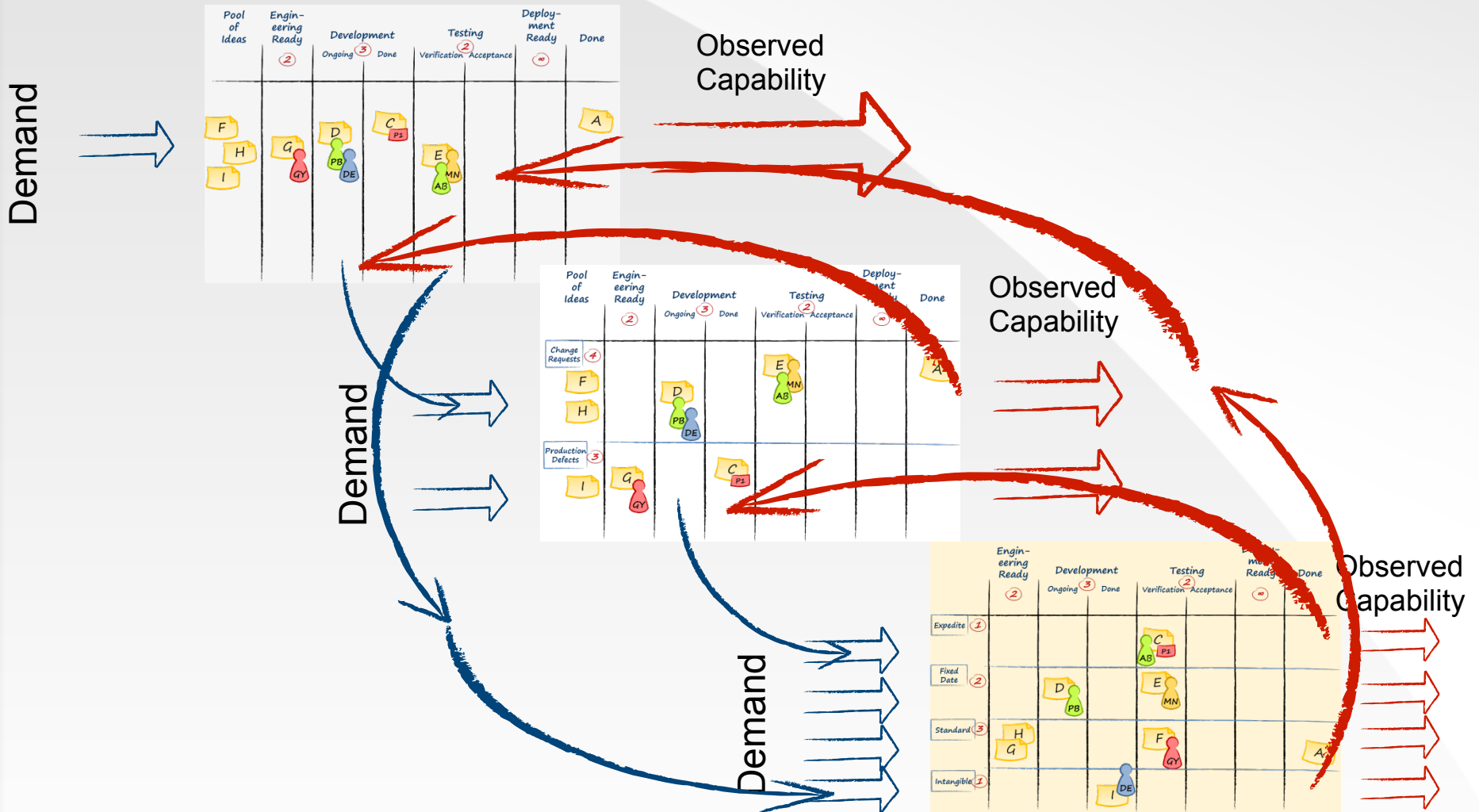
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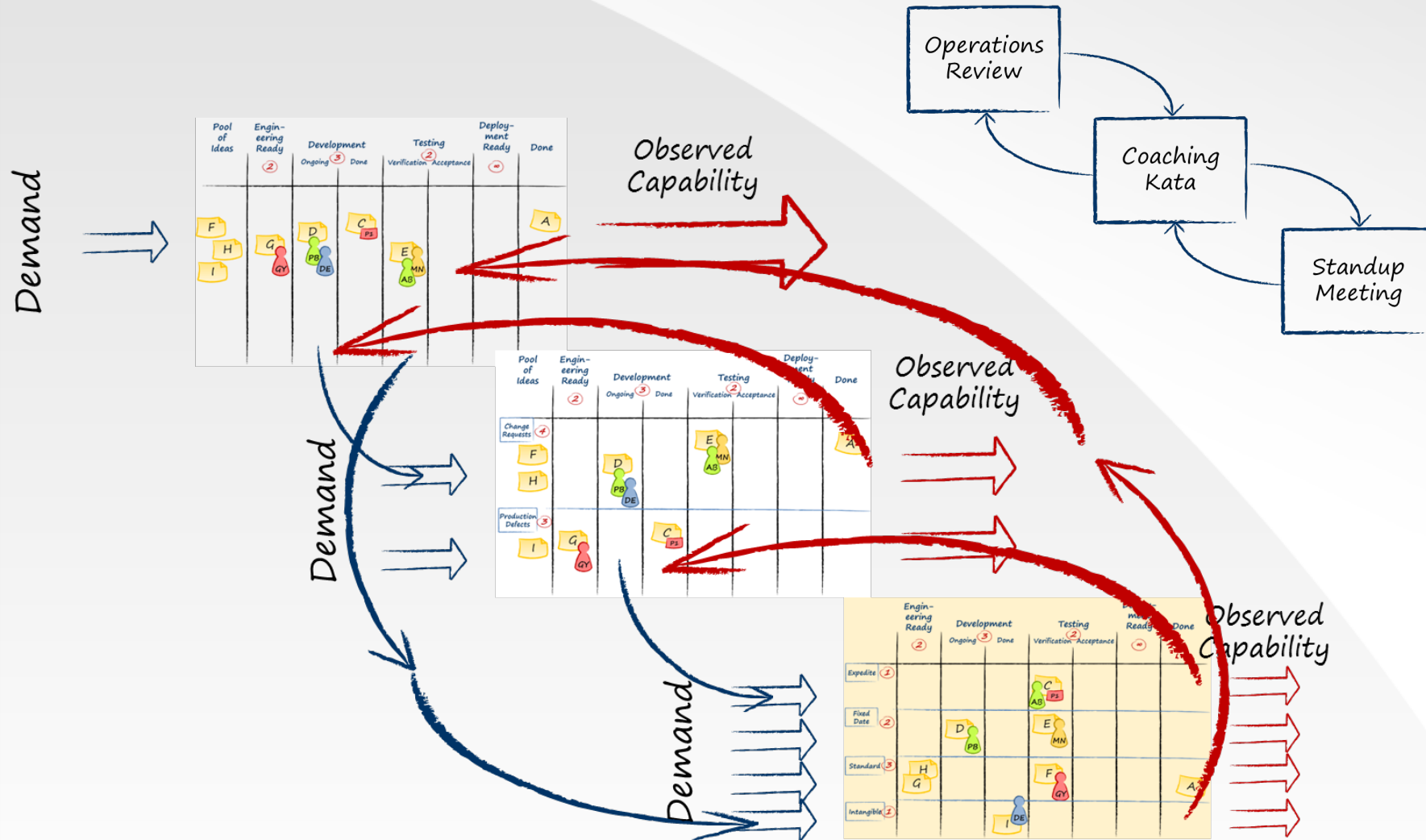
Observed Capability



Some systems have dependencies on others



Organizational Improvements Emerge



Scaling Kanban

Each Kanban System is designed from first principles around a service provided

Scale out in a service-oriented fashion

Do not attempt to design a ***grand solution*** at enterprise scale

The Kanban Kata are essential!

Allow a better system of systems to emerge over time

Collaboration Benefits

Shared language for improved collaboration

Shared understanding of dynamics of flow

Emotional engagement through visualization and tactile nature of boards

Greater empowerment (without loss of control)

Tangible Business Benefits

Improved predictability of lead time and delivery rate

Reduced rework

Improved risk management

Improved agility

Improved governance

Organizational Benefits

Improved trust and organizational social capital

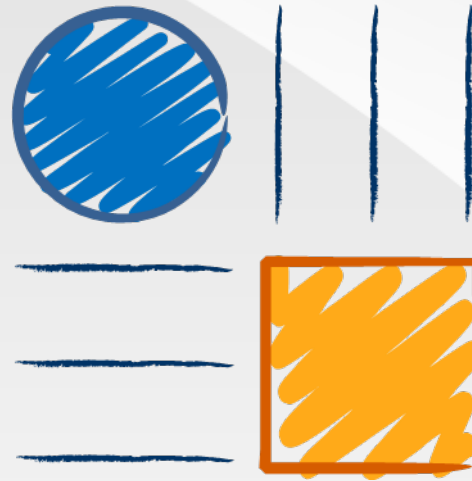
Improved organizational maturity

Emergence of systems thinking

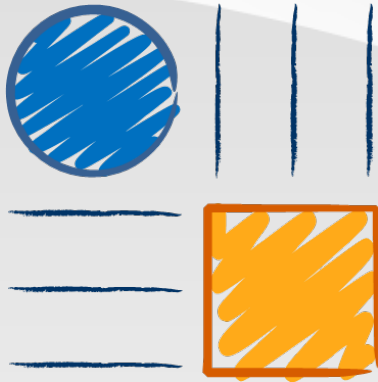
Management focused on system capability
through policy definition

Adaptability

(to shifts in demand and risks under management)



Thank you!



About

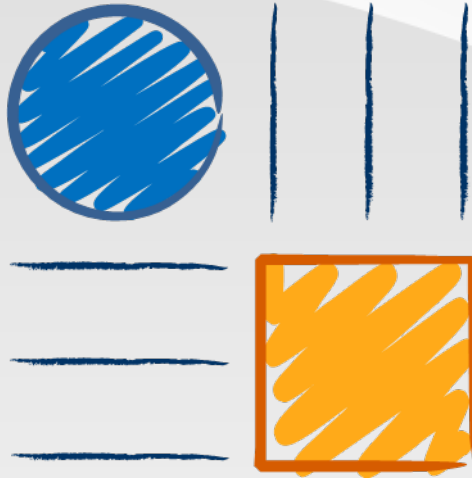
David Anderson is a thought leader in managing effective software teams. He leads a consulting, training and publishing and event planning business dedicated to developing, promoting and implementing sustainable evolutionary approaches for management of knowledge workers.



He has 30 years experience in the high technology industry starting with computer games in the early 1980's. He has led software teams delivering superior productivity and quality using innovative agile methods at large companies such as Sprint and Motorola.

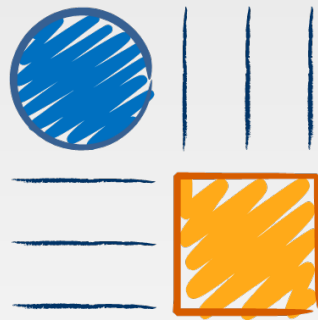
David is the pioneer of the **Kanban Method** an agile and evolutionary approach to change. His latest book, published in June 2012, is, **Lessons in Agile Management – *On the Road to Kanban***.

David is a founder of the **Lean-Kanban University Inc.**, a business dedicated to assuring quality of training in Lean and Kanban for knowledge workers throughout the world.



Acknowledgements

Hakan Forss of Avega Group in Stockholm has been instrumental in defining the Kanban Kata and evangelizing its importance as part of a Kaizen culture. He also challenged the incremental sequence of practice adoption and catalyzed the discussion that led directly to adoption of the multi-dimensional depth of Kanban assessment framework.



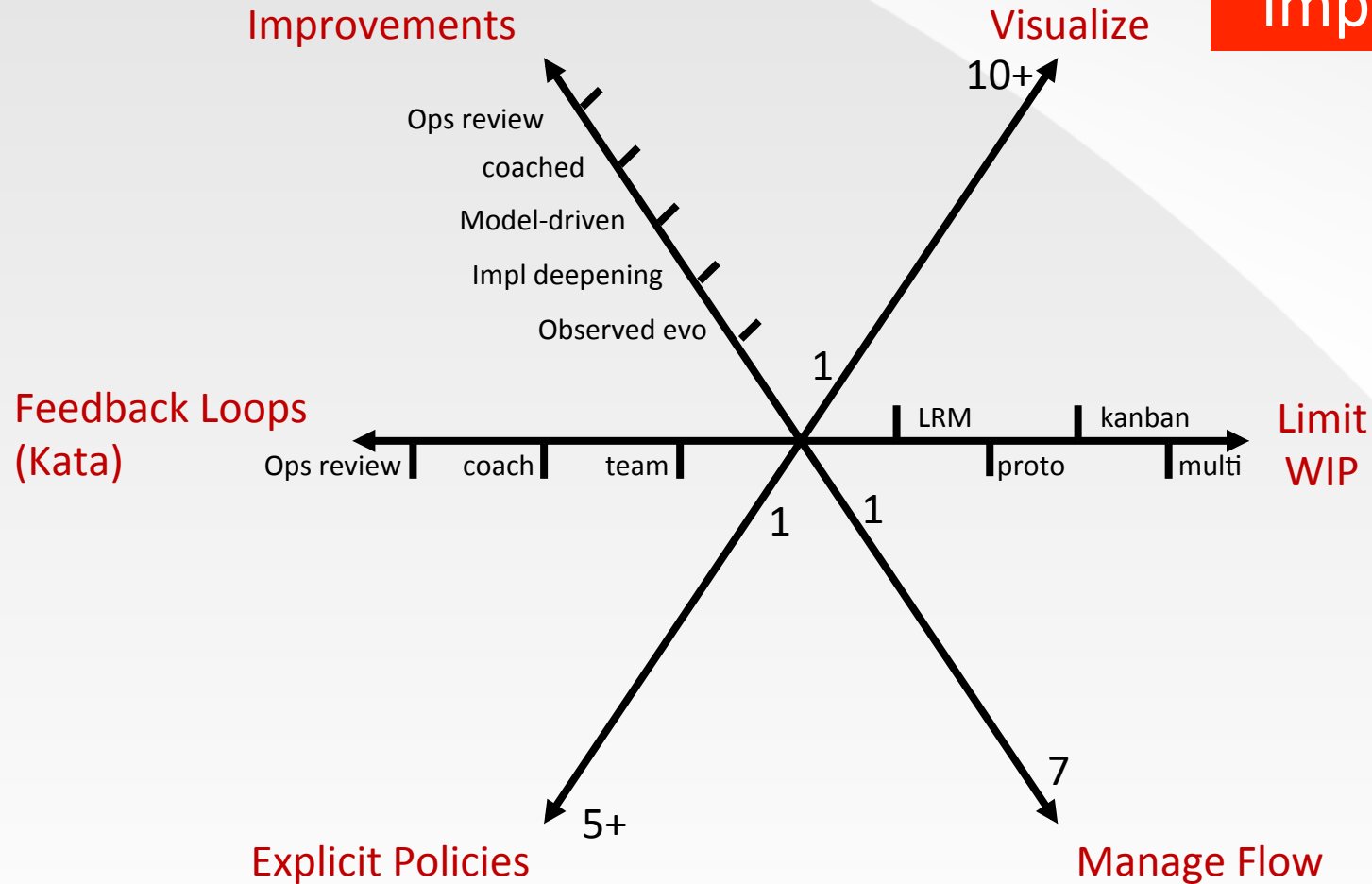
David J Anderson & Associates, Inc.

Appendix

**Can you draw this chart for your team
or organization?**

Use this template...

What shape is your Kanban implementation?



Example Distributions

