

Kanban

Kanban

=

“signal card”

入園票

退出のときお返し下さい
午後4時30分に閉園します

Admission Ticket

Please return this ticket
at the exit.



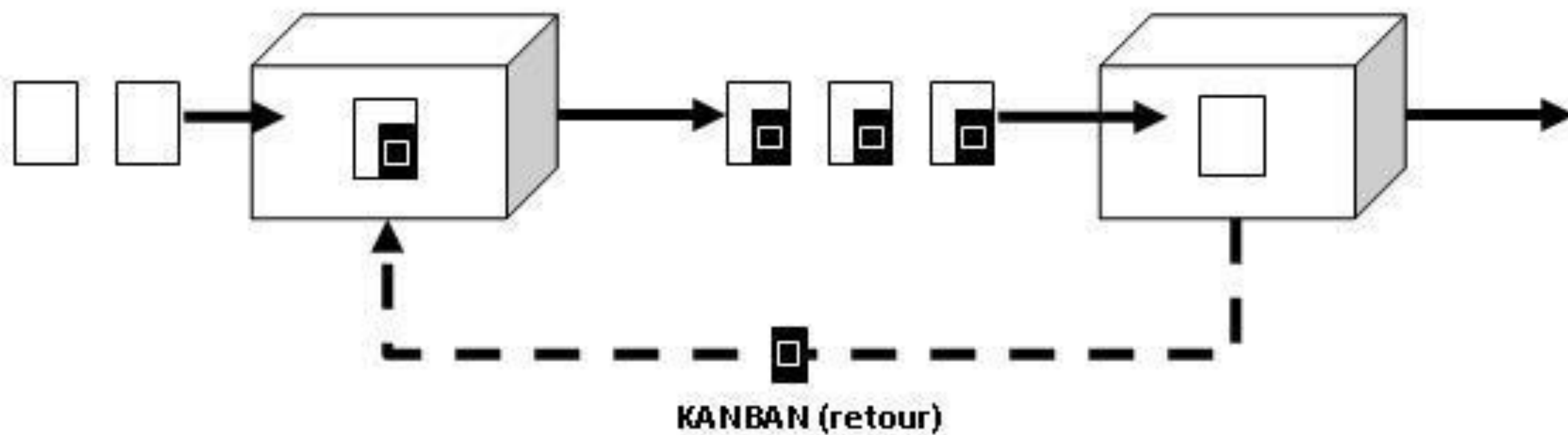
Container avec KANBAN



Ticket KANBAN

Poste 1

Poste 2



Pull Signal - Card

Point of
Manufacturing

D

MN

Point of
Use

Description

2055 5627
CMPT PAN
27STYLE

Part Number

Standard
Pack
Container

GBL
CA29

Designated
Storage
Area

STORE
MN

Standard
Pack
Quantity

75
PCS

Part number	VIT0027
Part description	BOLT
Supplier	S005 Acme inc.
Customer	W001 Raw mat. warehouse
Lead Time	5 working days
Bin	CT09
Quantity	300 PCS



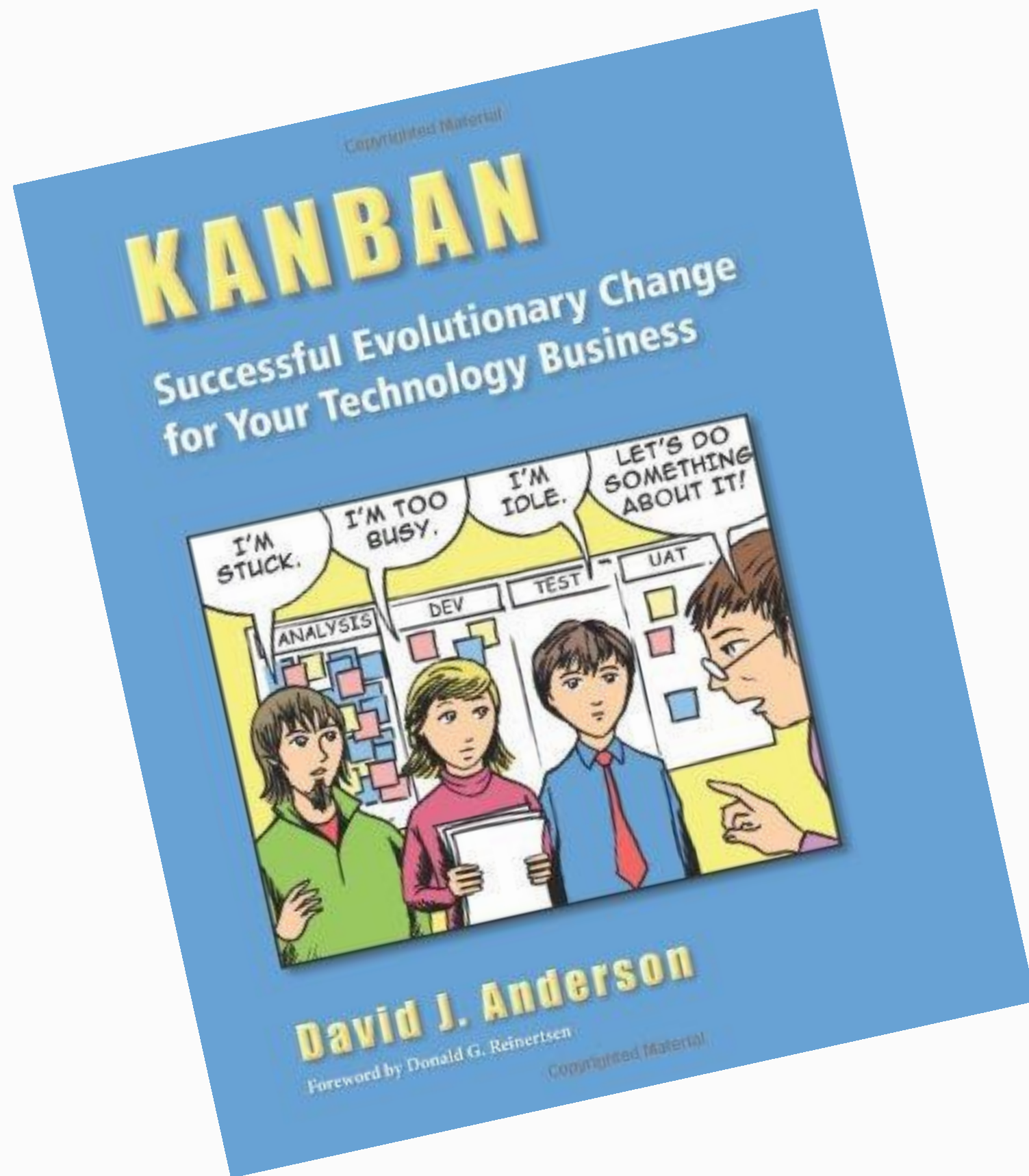
52YQ2U5M

Limits
work in progress
(WIP)

PART NO.	K5487	PART NO.	PH467	PART NO.	R64	PART NO.	C597
DO	DONE	DO	DONE	DO	DONE	DO	DONE
Task 1 (100%) per member - 12/10/2020 12/10/2020 1:00						Task 1 (100%) per member - 12/10/2020 12/10/2020 1:00	
Task 2 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 2 (100%) per member - 12/10/2020 12/10/2020 1:00				Task 2 (100%) per member - 12/10/2020 12/10/2020 1:00	
Task 3 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 3 (100%) per member - 12/10/2020 12/10/2020 1:00				Task 3 (100%) per member - 12/10/2020 12/10/2020 1:00	
Task 4 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 4 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 4 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 4 (100%) per member - 12/10/2020 12/10/2020 1:00	
Task 5 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 5 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 5 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 5 (100%) per member - 12/10/2020 12/10/2020 1:00	
Task 6 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 6 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 6 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 6 (100%) per member - 12/10/2020 12/10/2020 1:00	
Task 7 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 7 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 7 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 7 (100%) per member - 12/10/2020 12/10/2020 1:00	
Task 8 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 8 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 8 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 8 (100%) per member - 12/10/2020 12/10/2020 1:00	
Task 9 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 9 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 9 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 9 (100%) per member - 12/10/2020 12/10/2020 1:00	
Task 10 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 10 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 10 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 10 (100%) per member - 12/10/2020 12/10/2020 1:00	
Task 11 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 11 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 11 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 11 (100%) per member - 12/10/2020 12/10/2020 1:00	
Task 12 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 12 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 12 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 12 (100%) per member - 12/10/2020 12/10/2020 1:00	
Task 13 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 13 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 13 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 13 (100%) per member - 12/10/2020 12/10/2020 1:00	
Task 14 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 14 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 14 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 14 (100%) per member - 12/10/2020 12/10/2020 1:00	
Task 15 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 15 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 15 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 15 (100%) per member - 12/10/2020 12/10/2020 1:00	
Task 16 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 16 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 16 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 16 (100%) per member - 12/10/2020 12/10/2020 1:00	
Task 17 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 17 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 17 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 17 (100%) per member - 12/10/2020 12/10/2020 1:00	
Task 18 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 18 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 18 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 18 (100%) per member - 12/10/2020 12/10/2020 1:00	
Task 19 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 19 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 19 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 19 (100%) per member - 12/10/2020 12/10/2020 1:00	
Task 20 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 20 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 20 (100%) per member - 12/10/2020 12/10/2020 1:00		Task 20 (100%) per member - 12/10/2020 12/10/2020 1:00	



- Kanban systems \subset Pull systems
 - Systematic way to achieve a sustainable pace of work
 - An approach to introducing process changes that would meet with minimal resistance
- Kanban requires that process policies are defined explicitly
- First virtual Kanban system for software engineering: 2004, Microsoft

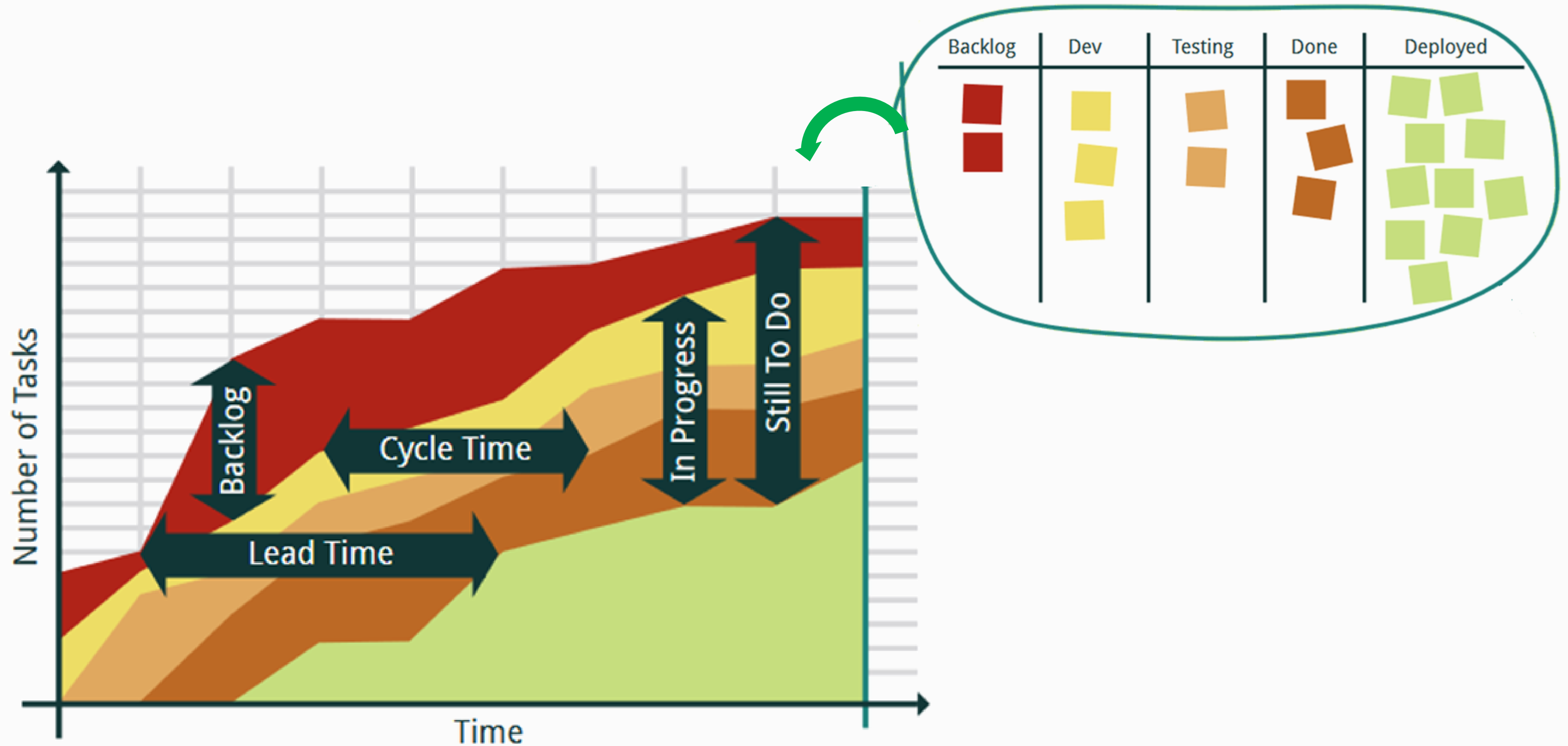


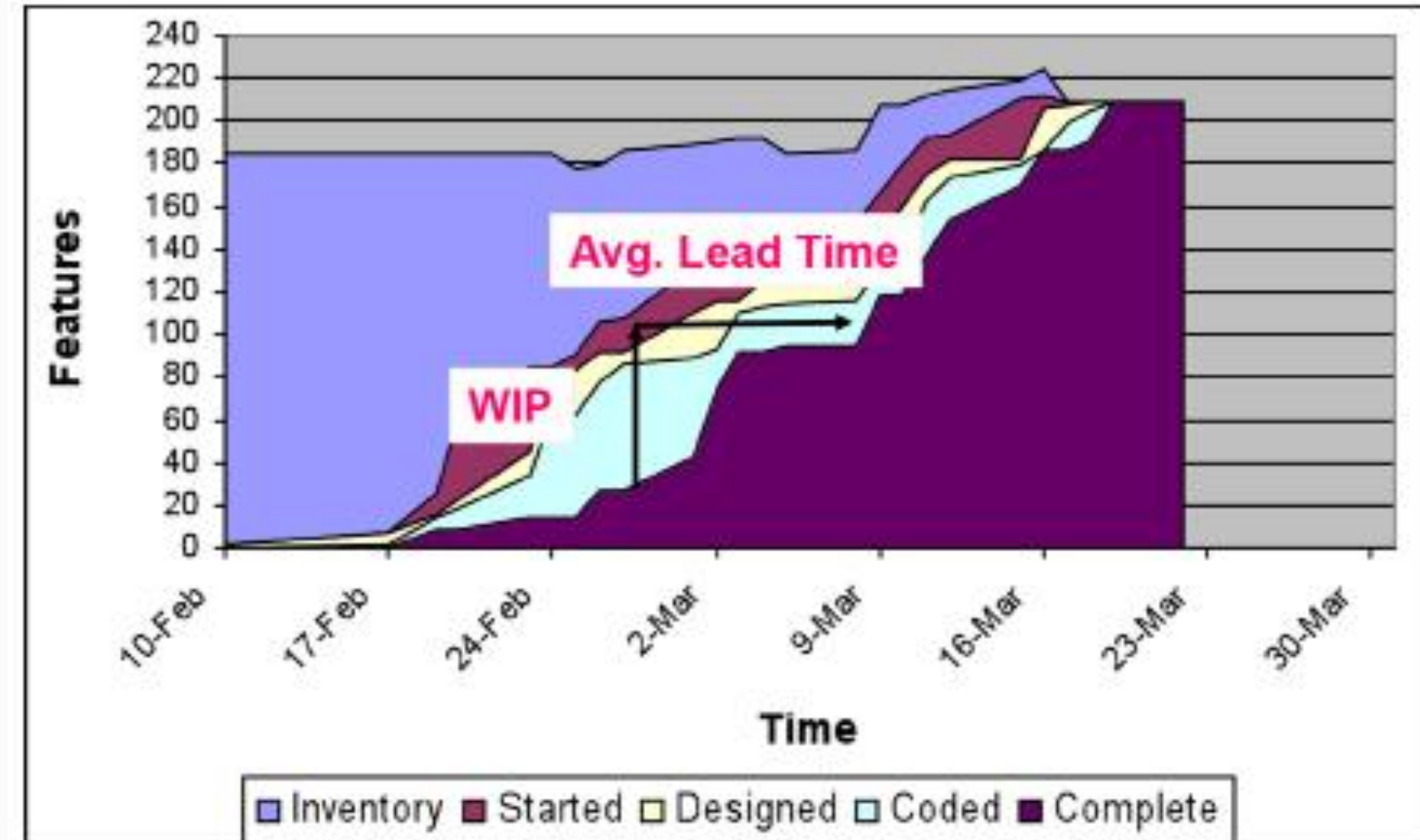
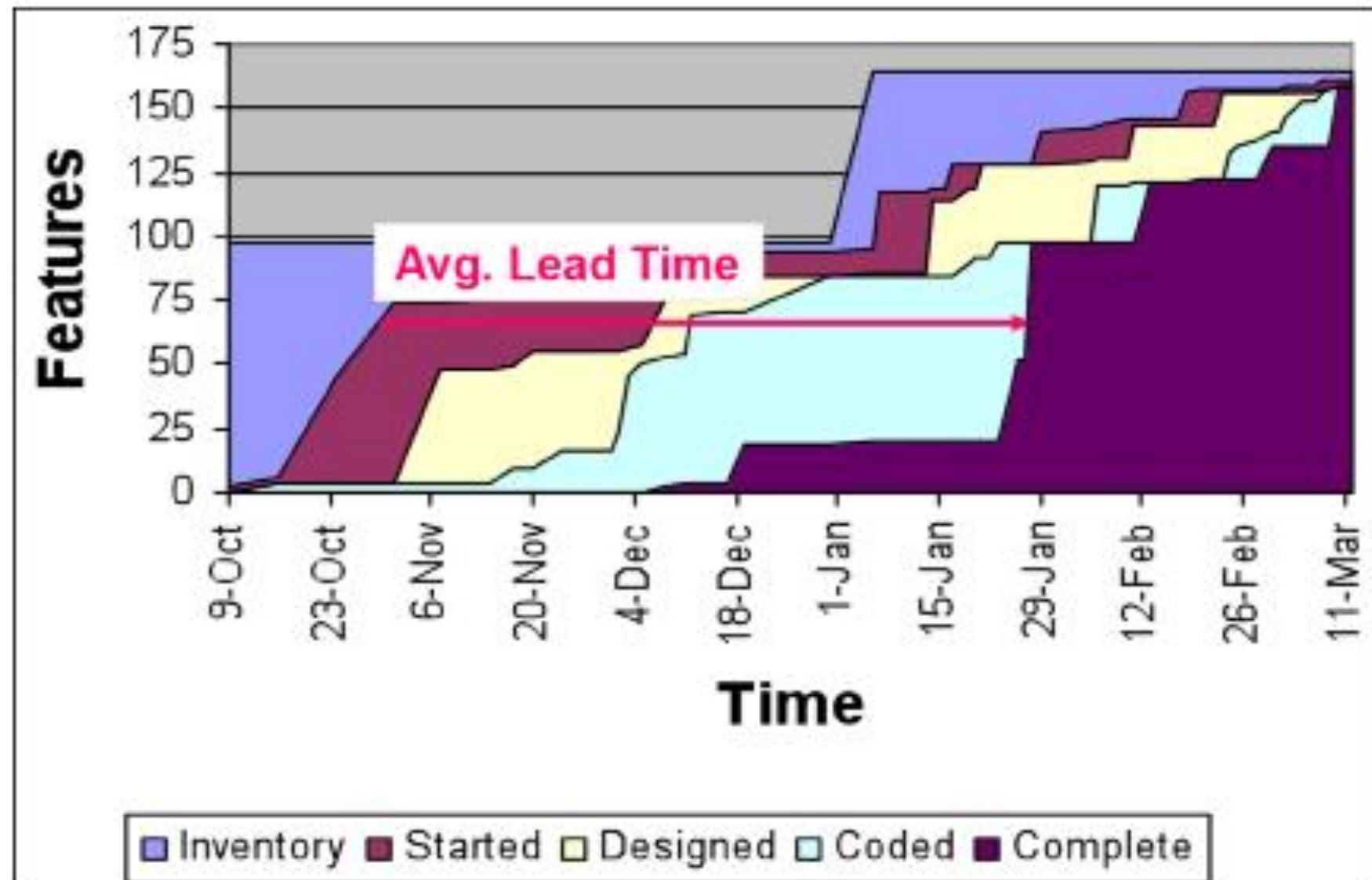
Recipe for success

- Focus on Quality
- Reduce WIP
- Deliver Often
- Prioritize
- Attack sources of variability to improve predictability

Kanban delivers all of them!

Cumulative Flow Diagram





1. Longer lead times seem to be associated with significantly poorer quality!
2. Great amounts of WIP -> Longer lead times

Conclusion

- Reducing work-in-progress, or shortening the length of an iteration, will have a **significant** impact on initial quality.

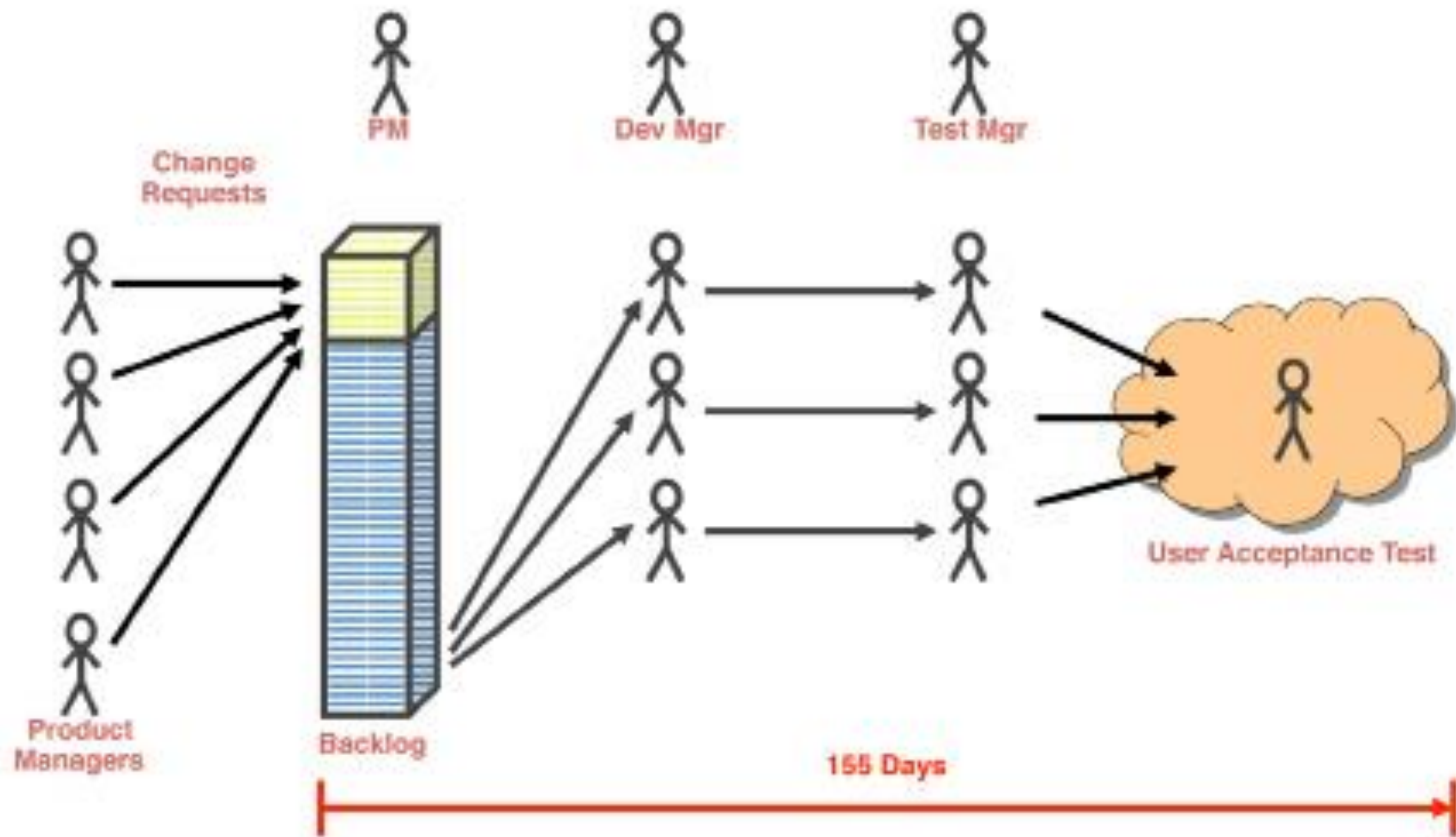
Also...

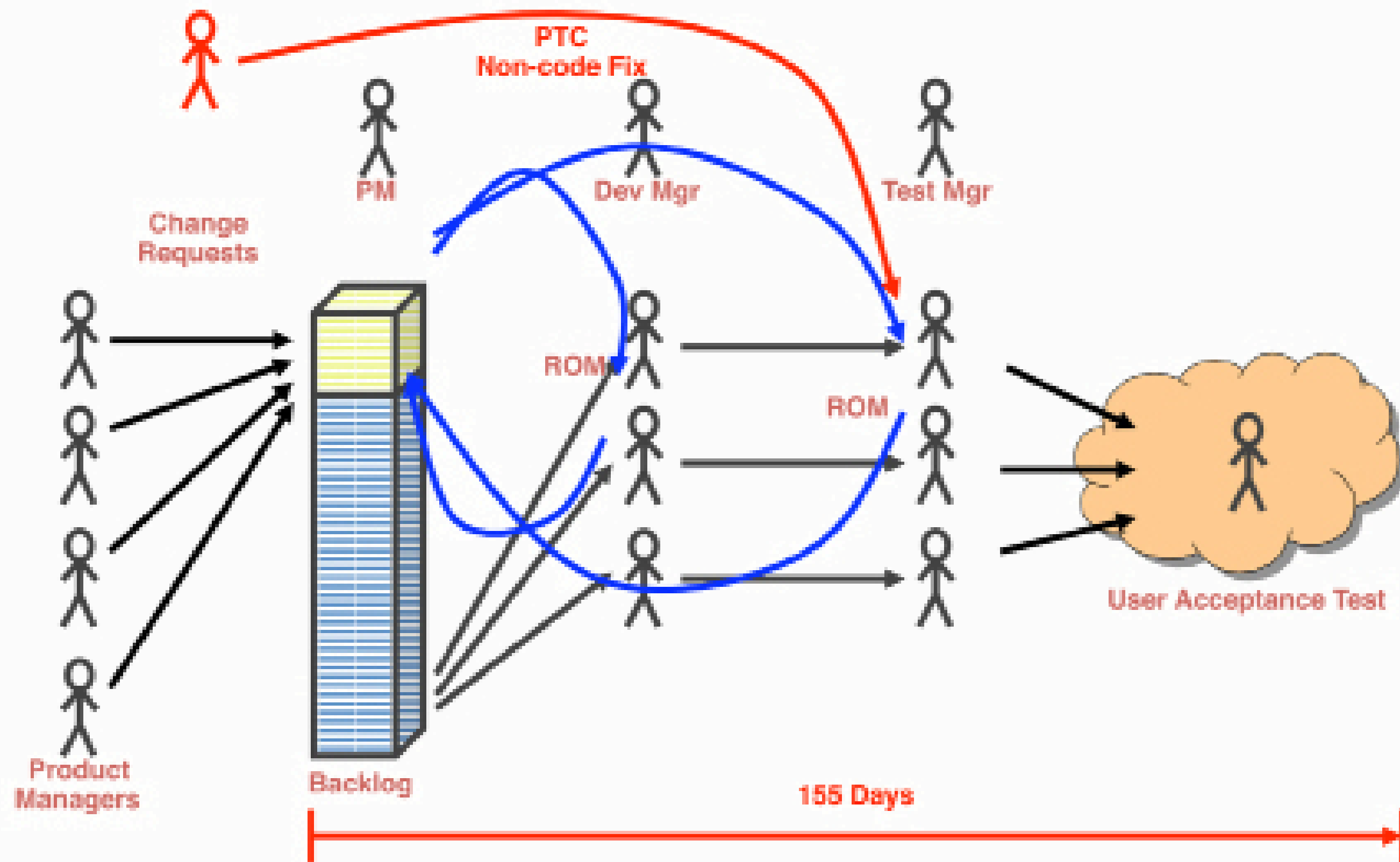
- Frequent releases build trust

- The throughput of a process is constrained by a bottleneck.
- It's unlikely we know where that bottleneck is. (all claim to be completely overloaded)
- When limiting the work-in-progress within \Rightarrow only the bottleneck resources will remain fully loaded.
- The other workers in the value stream will find they have slack capacity.



2004 - developed upgrades & fixed production bugs
for about 80 cross-functional IT applications used by
Microsoft

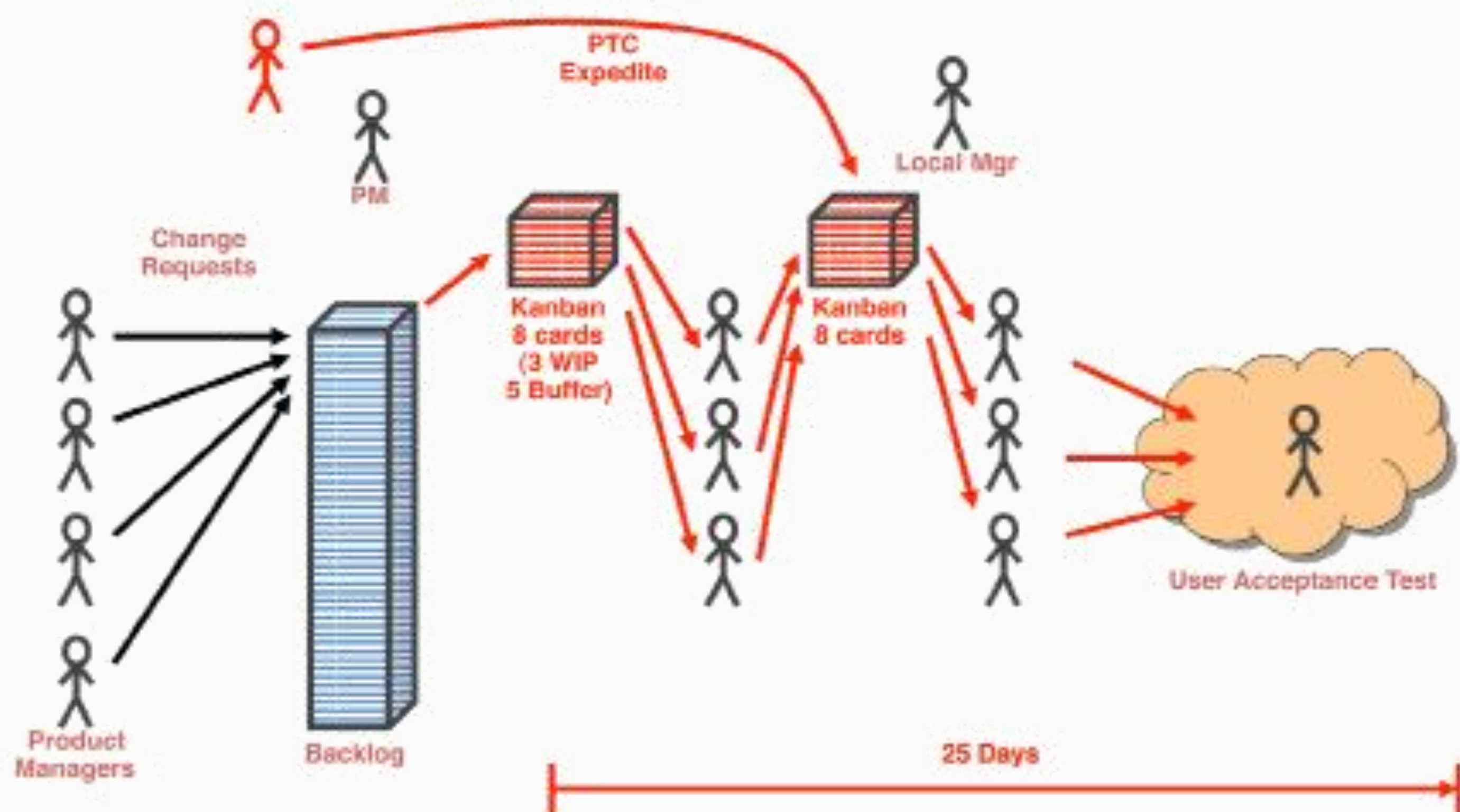


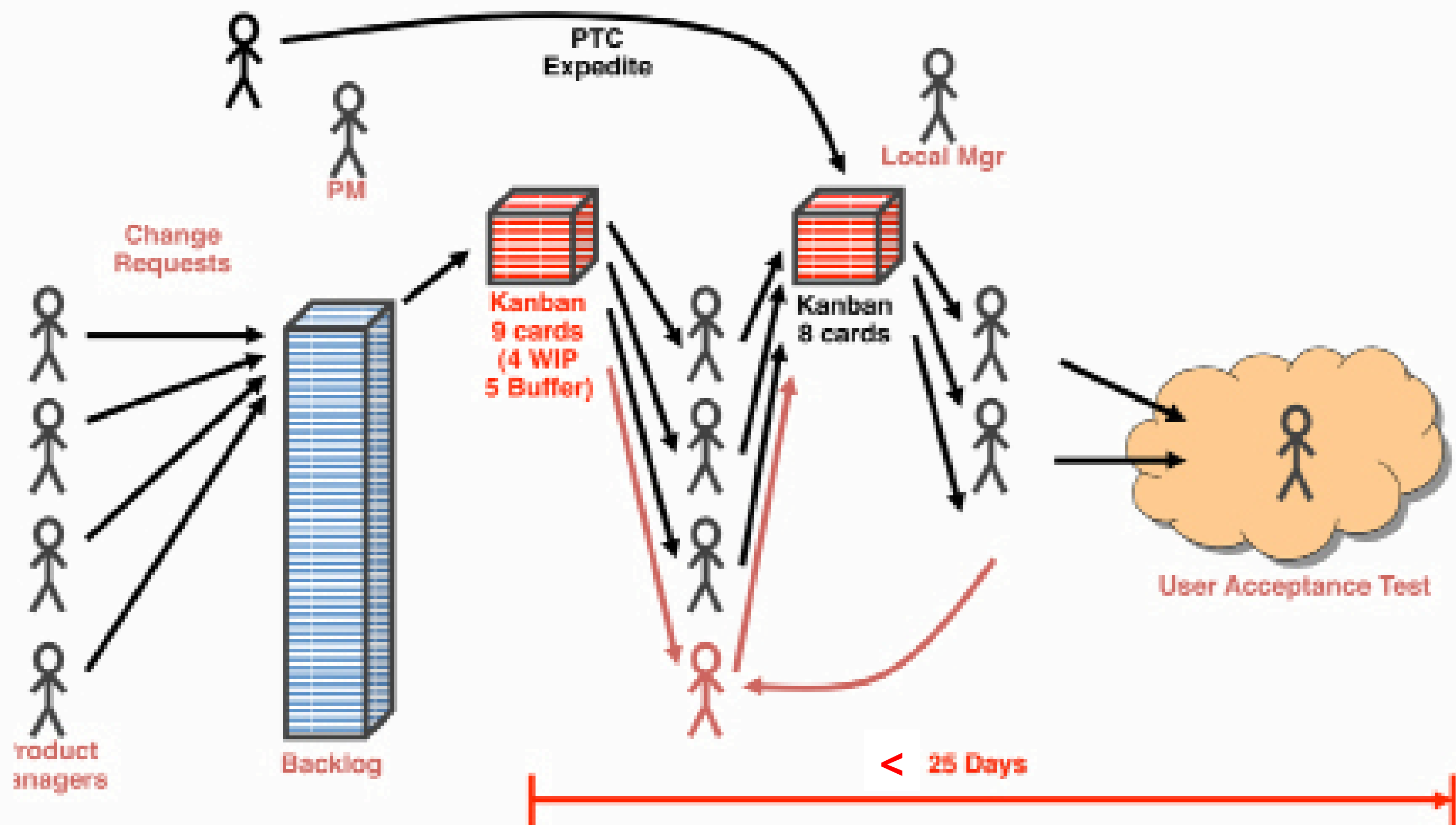


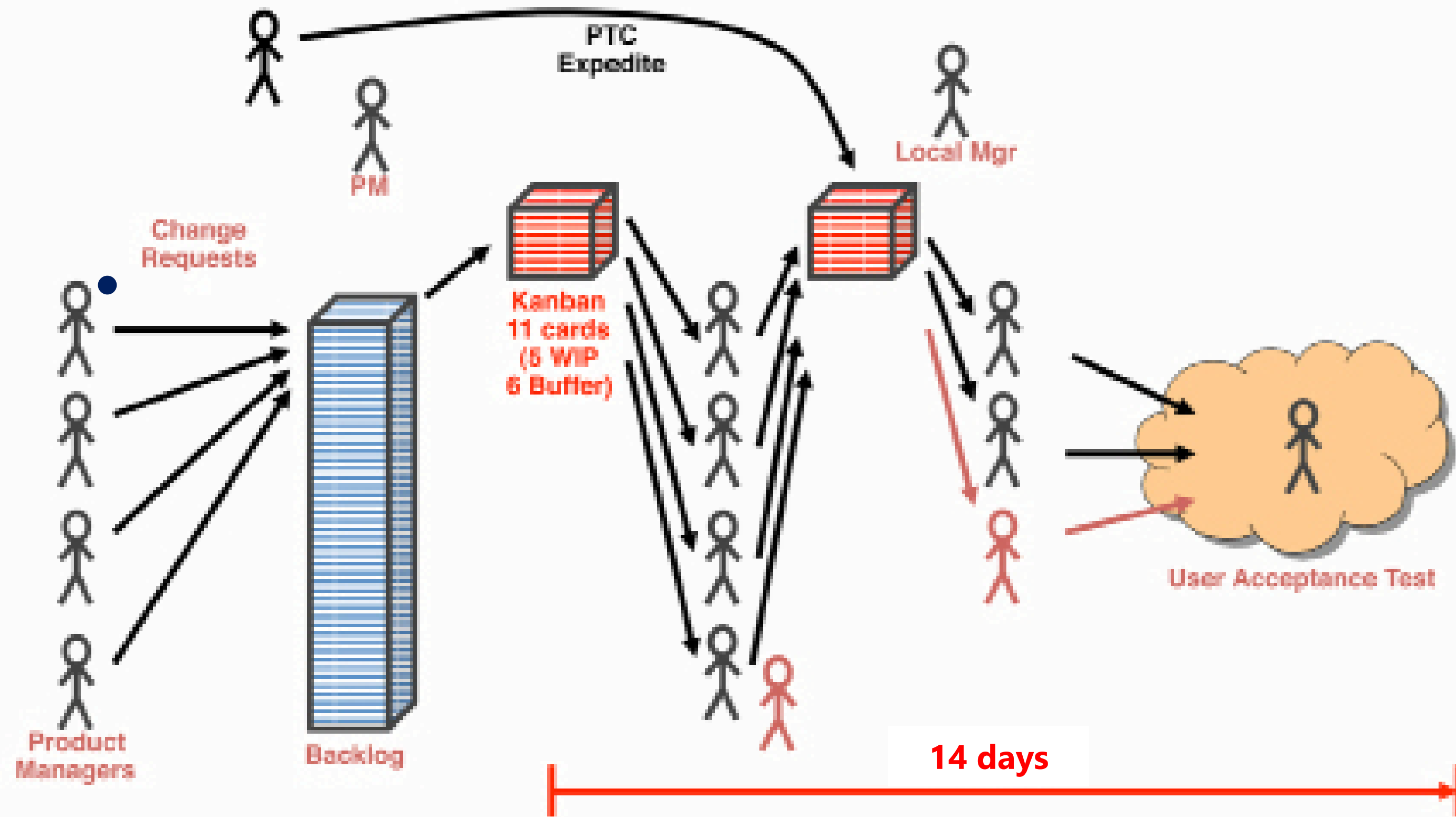
An average request took 11 days of engineering!!!

⇒ More than 90 percent of the lead time was queuing, or other forms of waste.

⇒ The estimation effort was consuming 33-40% of capacity







The backlog was eliminated entirely on November 22, 2005!

Conclusions after implementing first Kanban System

Kanban:

- enables incremental changes
- enables change with reduced political risk
- enables change with minimal resistance
- will reveal opportunities for improvement that do not involve complex changes to engineering methods

Changes can take time to take full effect!

AgileBy
Example
conference

Warsaw, Poland

October 16-18, 2013

Paul Klipp

My first five years with Kanban – harsh lessons on the quest for flow

allegro group

Gemius

scrum bay

Nitronet
Media Technology

conventica

CodeSprinters
Experts in Agile

Brass Willow
THE SCRUM PEOPLE

INTERIA.PL

WP.PL

k+ karieraplus.pl

Governica

ZARZĄDZANIE
PROJEKTAMI.

SPAI
10 LAT

SOFTWAREMILL

TouK

AgileWarsaw

FluidCircle
Płynność w dostawie

agilebyexample.com

<https://www.youtube.com/watch?v=8X3SbHmWzGo>