

# Business Analysis

## Exploring 5 Project Approaches

And the role of the BA

For IIBA Outaouais Chapter Meeting  
November 16, 2021

# Summary

Understand five (5) fundamentally different approaches to completing projects.

1. Waterfall
2. Spiral
3. Scrum
4. Kanban and
5. SAFe

All are valid and appropriate in the right context. The method that is right for your team and your organization depends upon many factors.

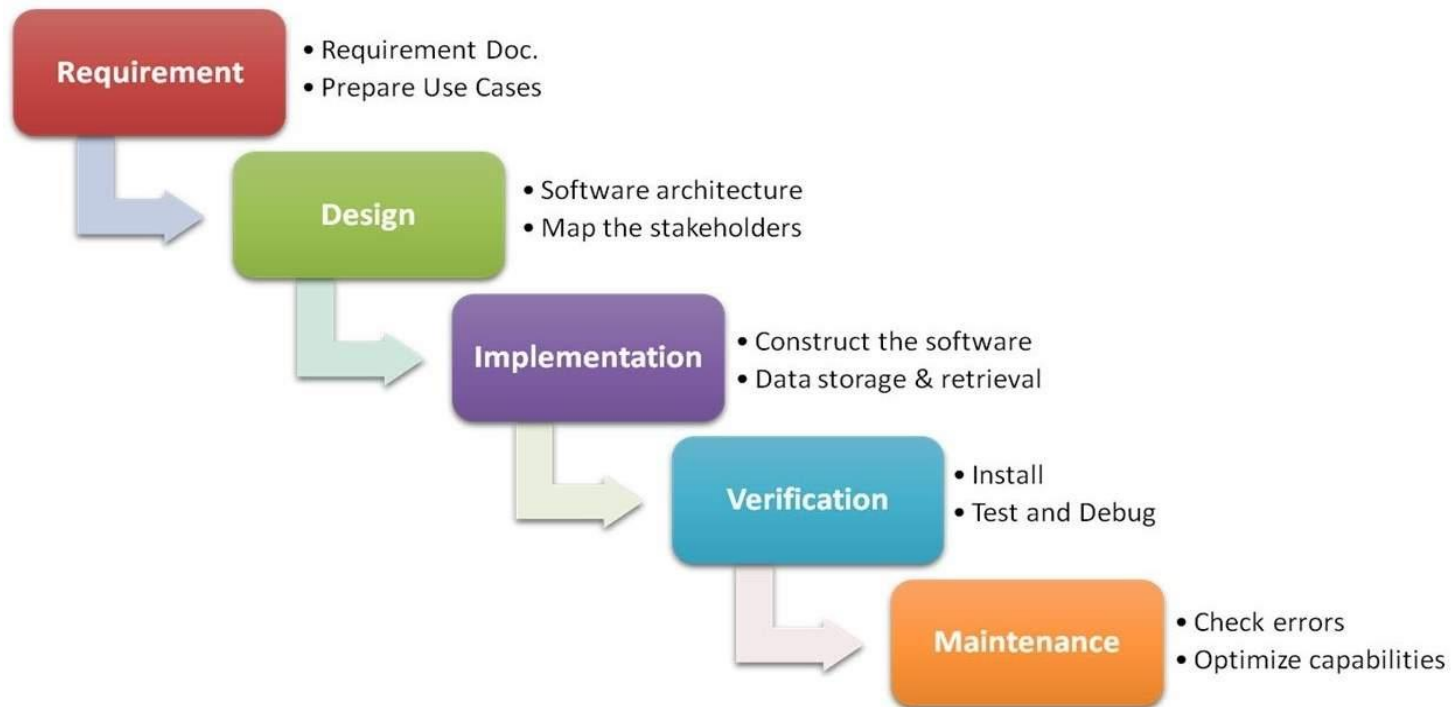
Understand the key considerations of each approach, and how a business analyst will contribute to the success of each type of project.

# Traditional (Predictive) Approaches

- Waterfall
- Spiral / Phased

# Waterfall

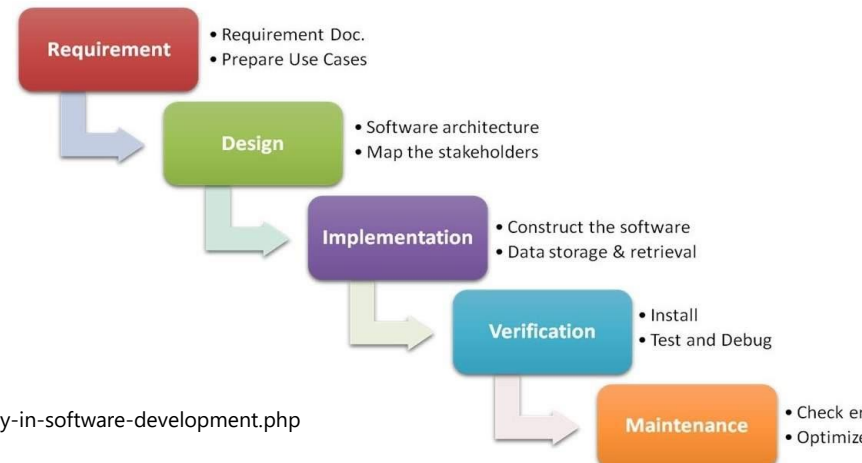
A sequential process, in which progress is seen as flowing steadily downwards (like a waterfall) through the phases



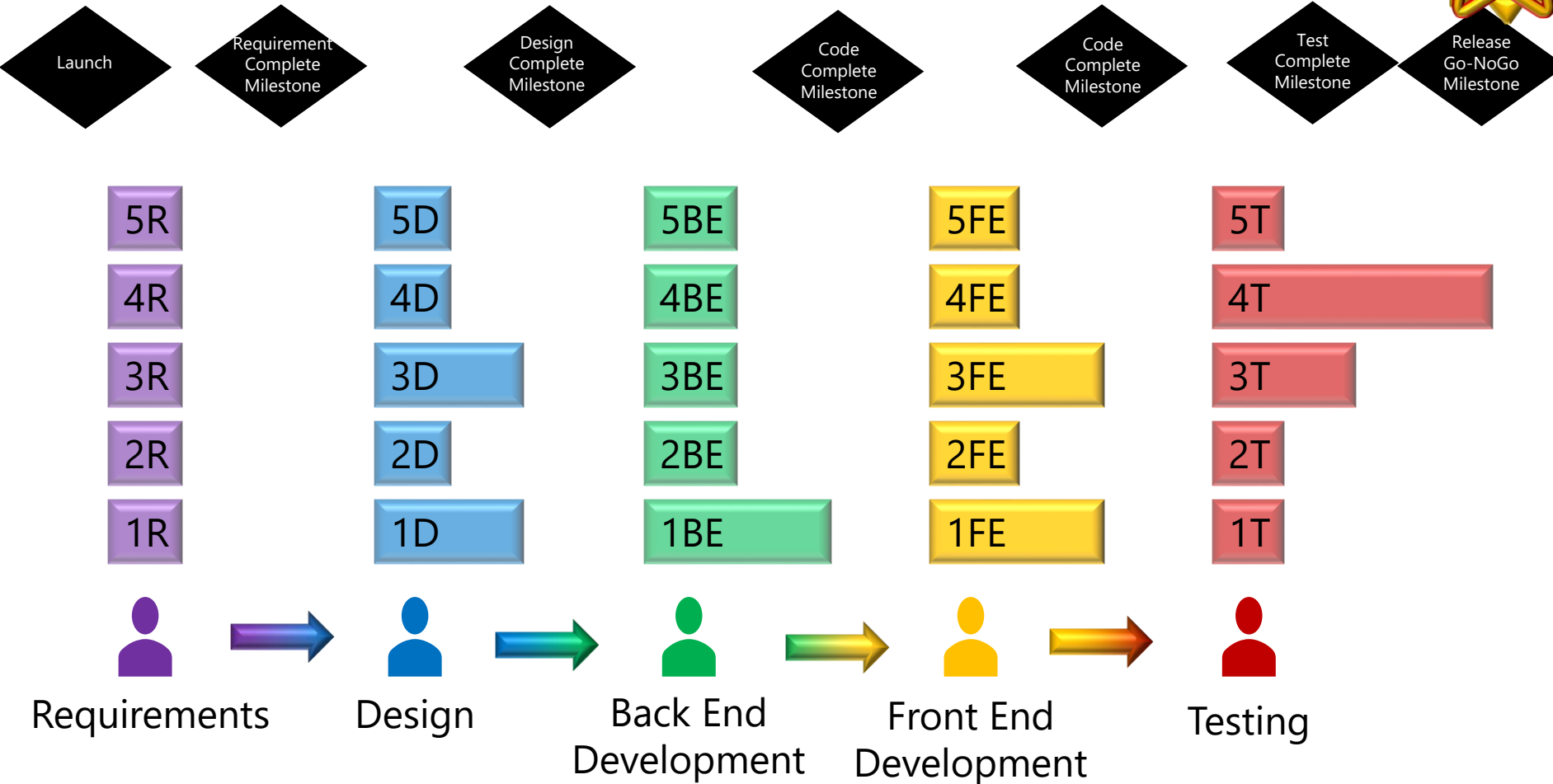
Ref: <https://www.ukessays.com/essays/computer-science/waterfall-methodology-in-software-development.php>

# Waterfall – The Role of a BA

1. Gather & document requirements (for entire project)
2. Manage requirements through lifecycle
3. Support the PM
4. Translator
5. Clarify requirements during development & testing
6. Execute acceptance tests (maybe)
7. After release (Benefit Realization - maybe)



# Waterfall Animation



Requirements

Design

Back End  
Development

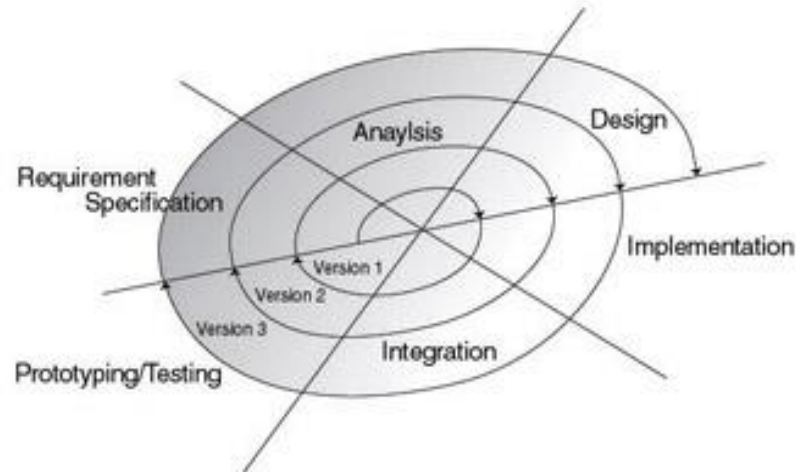
Front End  
Development

Testing

Role of the BA

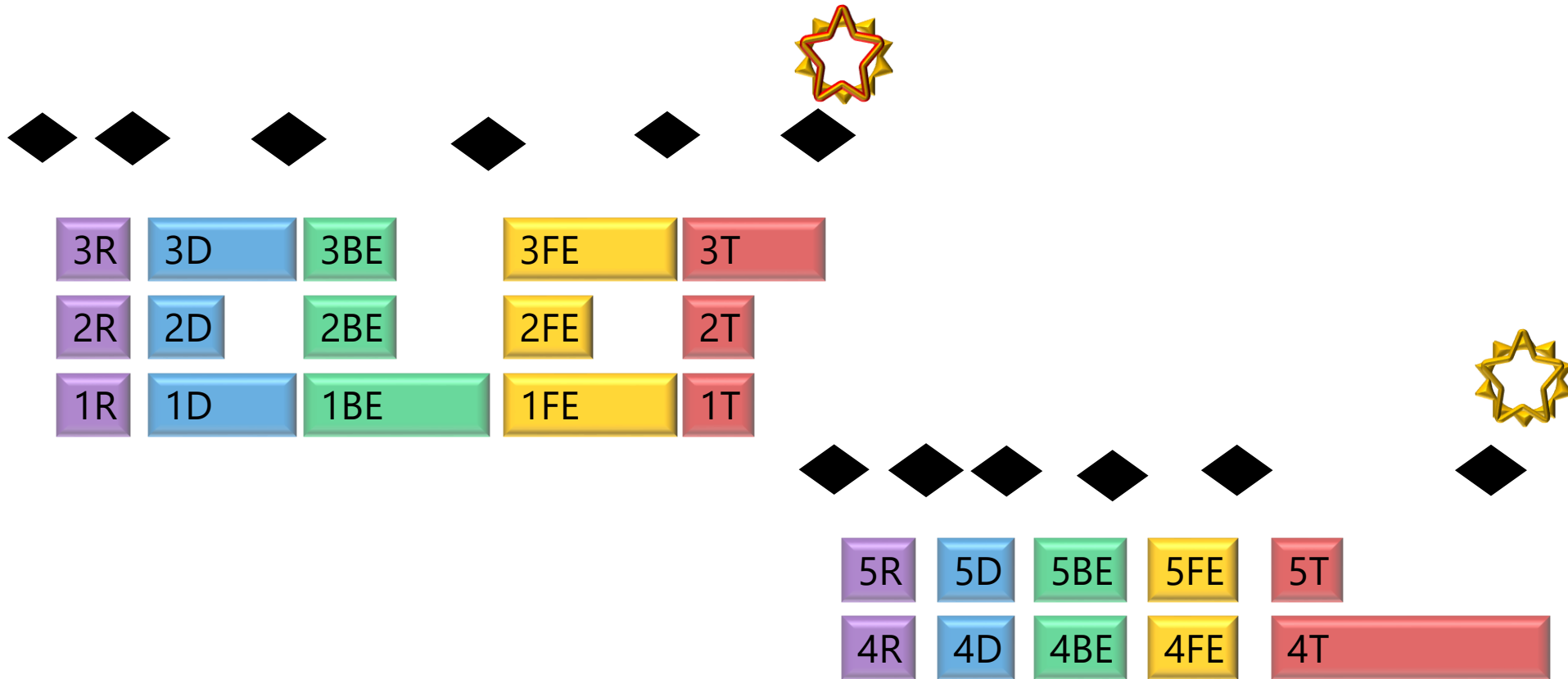
# Spiral (Phased) Development

The phases of traditional waterfall, but in quick succession.  
Sometimes viewed as a spiral or as overlapping phases



<http://beta.globalspec.com/reference/55319/203279/chapter-3-the-software-validation-cycle>

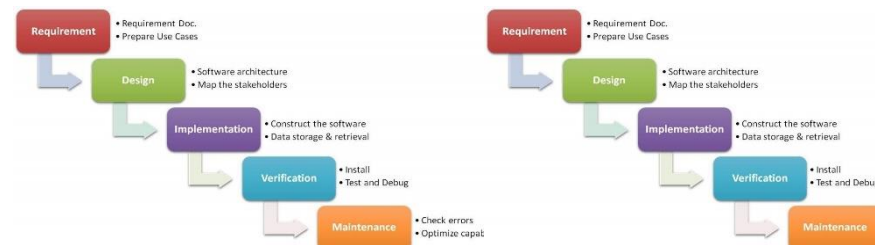
# Spiral / Iterative Animation





# Spiral – The Role of a BA

1. Gather & document requirements **(for each phase or release)**
2. Manage requirements through lifecycle
3. Support the PM
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# Traditional Engineering vs Systems Engineering

## Traditional Engineering

- Applying well understood techniques in an organized and disciplined way.
- Single release (may be phased)
- Defined objective

## Systems/Software Engineering

- Techniques and tools rapidly evolving
- Requirements difficult to define
- Requirements change
- Iterative development
- Many people working on a project – geographically dispersed – language/culture differences
- Component based development

# Traditional Approaches can Work Well

- Works well when:
  - Definition of outcome is well understood
  - Environment is relatively constant

## **BUT what if?**

- The client doesn't know what they want/need?
- External factors change what the client wants/needs?
- The environment is changing quickly?

# Agile (Iterative/Adaptive) Approaches

- Agile Approaches
  - Scrum
  - Kanban
  - Scaled Agile Framework (SAFe)
- Agile approaches are appropriate when
  - **the end product is not well defined...**
  - **requirements are evolving.**

# What is Agile?

Various approaches to software development under which requirements and solutions evolve through collaborative effort of self-organizing and cross-functional teams and their customers(end users). It advocates adaptive planning, evolutionary development, early delivery and continual improvement, and it encourages rapid and flexible response to change.

The *Agile Manifesto* introduced the term in 2001.

**>> Let's look at the key components**

[http://en.wikipedia.org/wiki/Agile\\_software\\_development](http://en.wikipedia.org/wiki/Agile_software_development)

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# A more encompassing definition of Agile

## **solution development and delivery**

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# Agile Values

An excerpt from the *Agile Manifesto* (2001).

Value:

- **Individuals and interactions** over processes and tools
- **Working software** over comprehensive documentation
- **Customer collaboration** over contract negotiation
- **Responding to change** over following a plan

That is, while there is value in the items on the right, agile values the items on the left more.

•[http://en.wikipedia.org/wiki/Agile\\_software\\_development](http://en.wikipedia.org/wiki/Agile_software_development)

# Scrum

- Iterative & incremental framework for complex work
- Can be used for SW & IT projects, maintenance
- Can be a general approach for project/program management
- Key players include:
  - **Scrum Master:** A coach, a guide, not a manager (but reality is...)
  - **Product Owner:** Defines the client/end vision
  - **Team:** Cross functional team completes the work



**Theory says**  
**No role delineation/specialty within team**  
**Everyone can do every task**

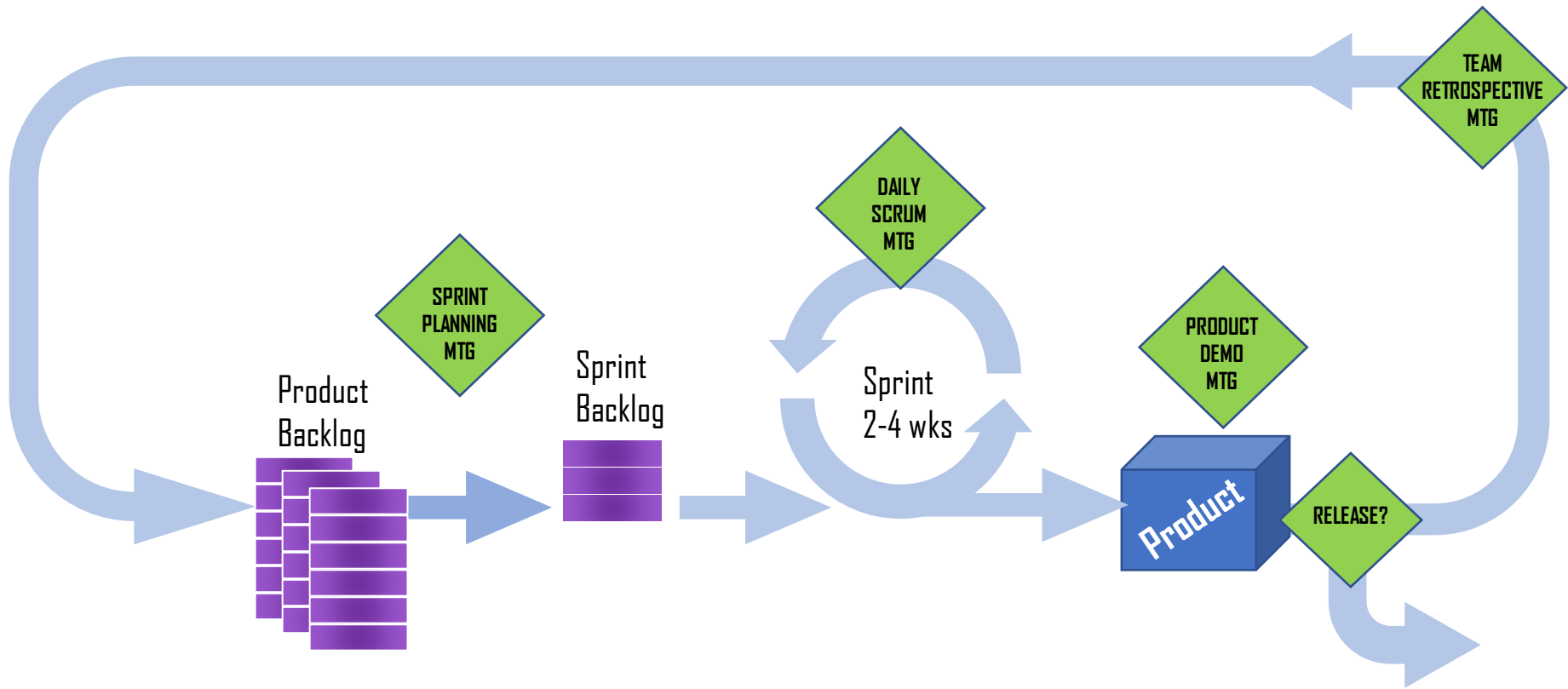
*Is this realistic?*

# Iterative, Incremental & Responsive

## Incremental

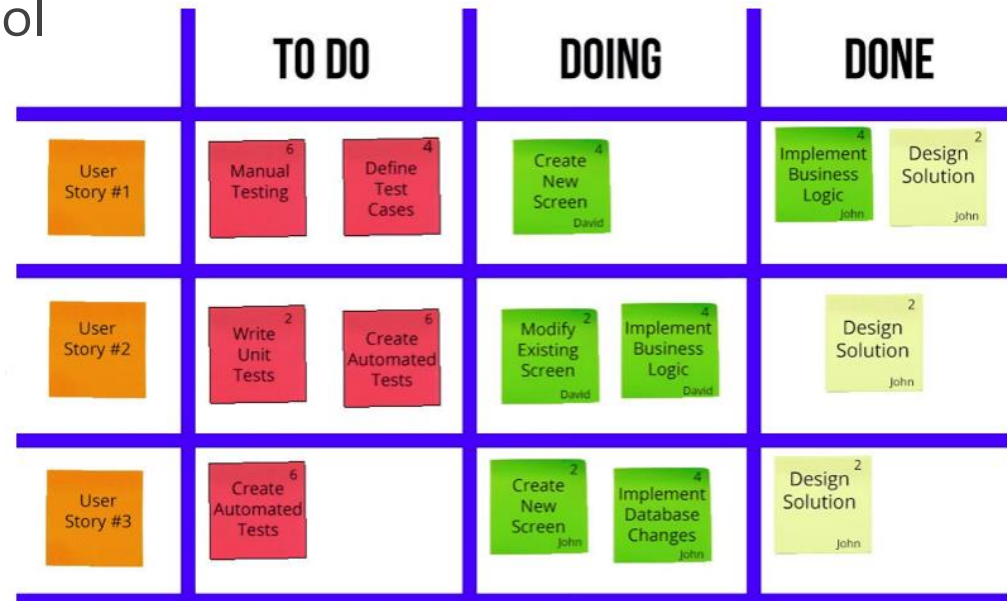


# Scrum Process



# Scrum Artefacts

- Product backlog
  - A prioritize list of **all features** for the product
- Sprint backlog
  - A prioritized **list of tasks** to be completed **during the sprint**.
  - Post-it notes or SW tool



**Working with a virtual team?  
Try...**  
**Slack.com, Jira, DevOps,  
MS Planner, Others**

# Scrum - Basic



Product Owner

Member1



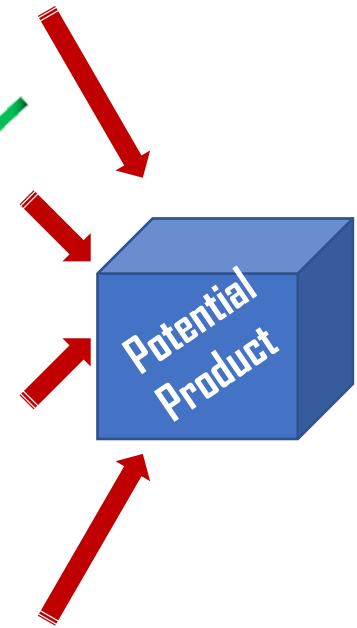
Member2



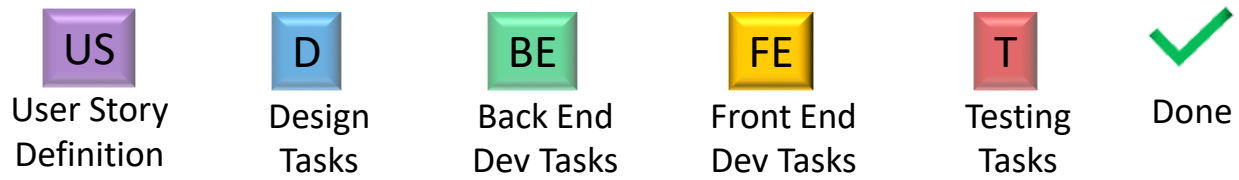
Member3



Member4

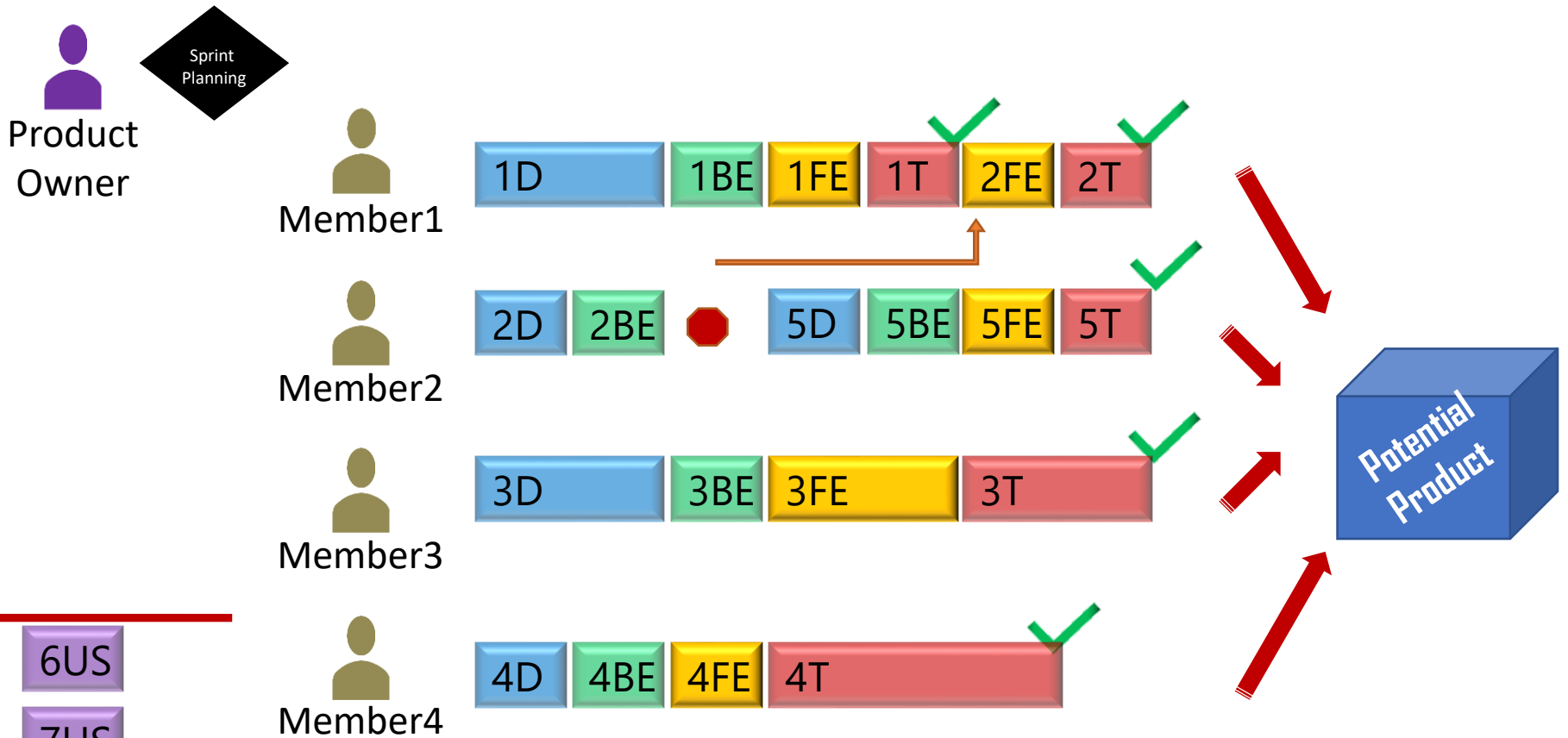


- 6US
- 7US
- 8US
- 9US





# Scrum – More Realistic

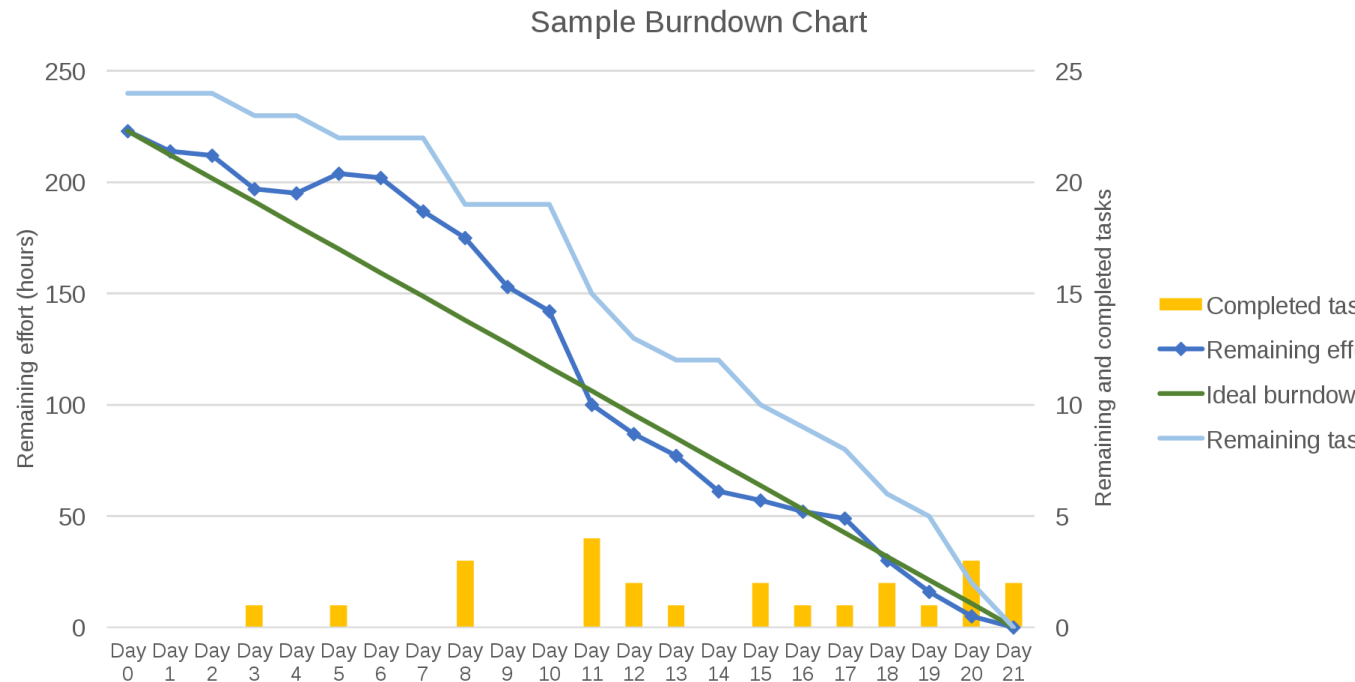


- 6US
- 7US
- 8US
- 9US

# Scrum Artefacts

- Burn down chart
  - Chart showing progress of work remaining for a sprint over the sprint's length.

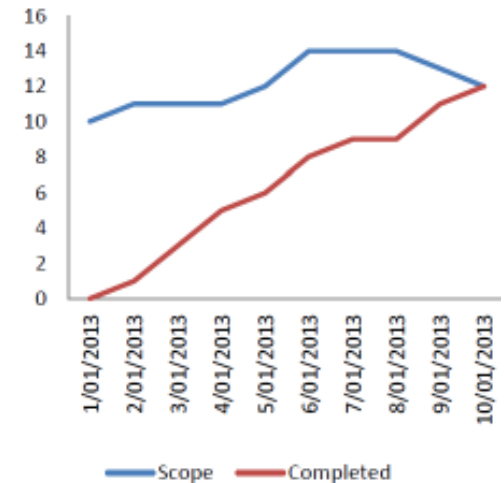
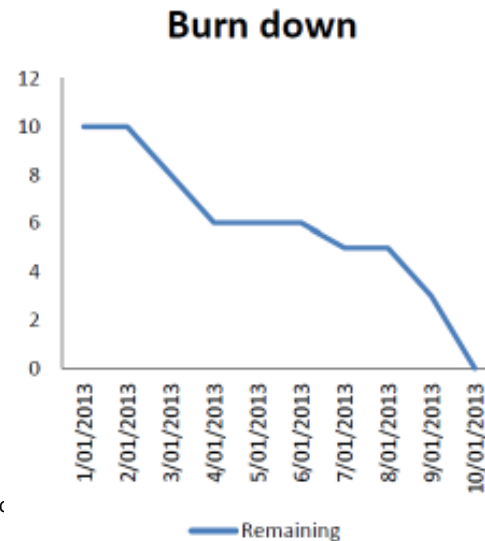
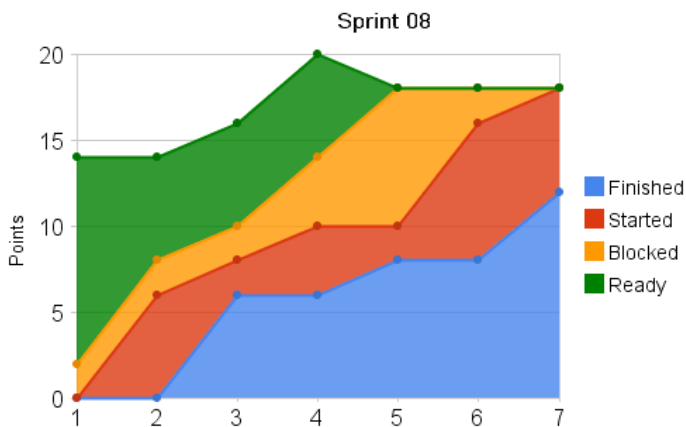
Can be applied for a single sprint or entire backlog



# Scrum Artefacts

- Burn up vs Burn down
  - Burn down chart: work outstanding
  - Burn up chart: work completed

Concept applied to sprint or release

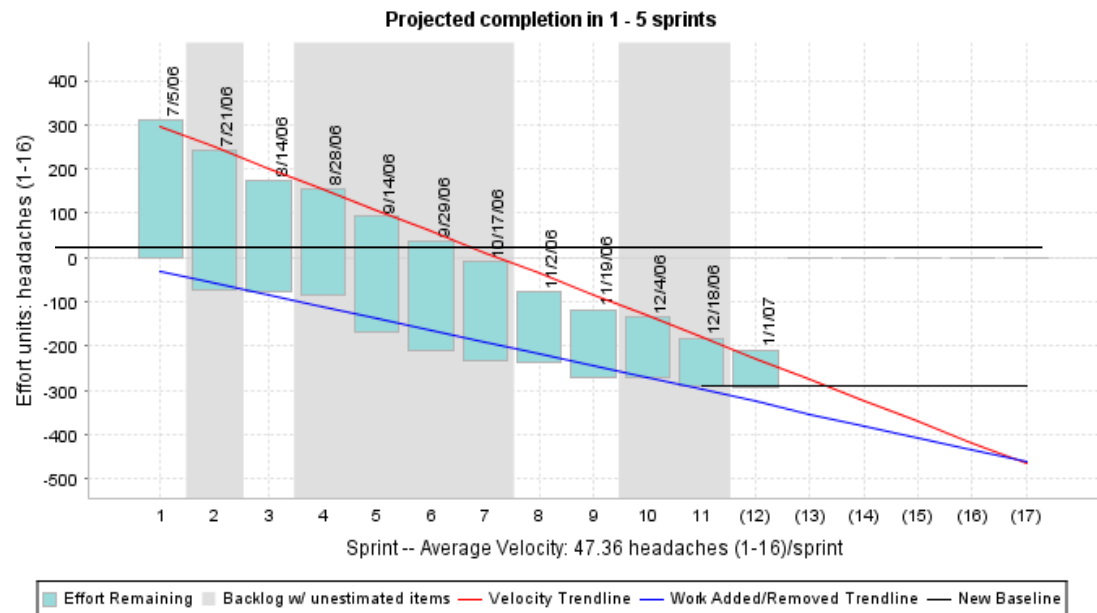


<https://guidewiredevelopment.wordpress.com/2009/01/29/burn-up-and-burn-down-charts/>

<http://www.clariostechology.com/productivity/blog/burnupvsburndownchart>

# Scrum Artefacts

- Velocity
  - the average amount of work completed in a sprint.
- Release:
  - A set of sprints



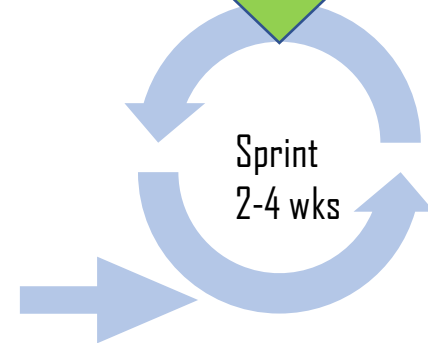
# Scrum – The Role of a BA

What is the size of the scrum team?

- Does the scrum team have a PO and BA? or does the BA play both roles?
  - Does the scrum team have a PM and SM?
1. Manage the backlog (if no separate PO)
  2. Refine user stories
  3. Support the scrum master (and/or PM, PO)
  4. Translator
  5. Clarify requirements during dev & test
  6. Execute acceptance tests (maybe)
  7. After release (add to backlog)



Sprint  
2-4 wks



# Does your team feel like this?

- Too many tasks
- Many tasks blocked
- Poor flow



# Kanban can help

- Kanban Fundamental concepts
  - Minimize work in progress
  - Minimize/eliminate waste

Client feedback is critical in both approaches

## Comparison between Scrum & Kanban

Scrum	Kanban
Time box	NA
Stories (small)	Meaningful features (large)
Team members are cross functional – All team members can do all tasks	Respect skill differences between team members
Velocity	Cycle time

# Kanban

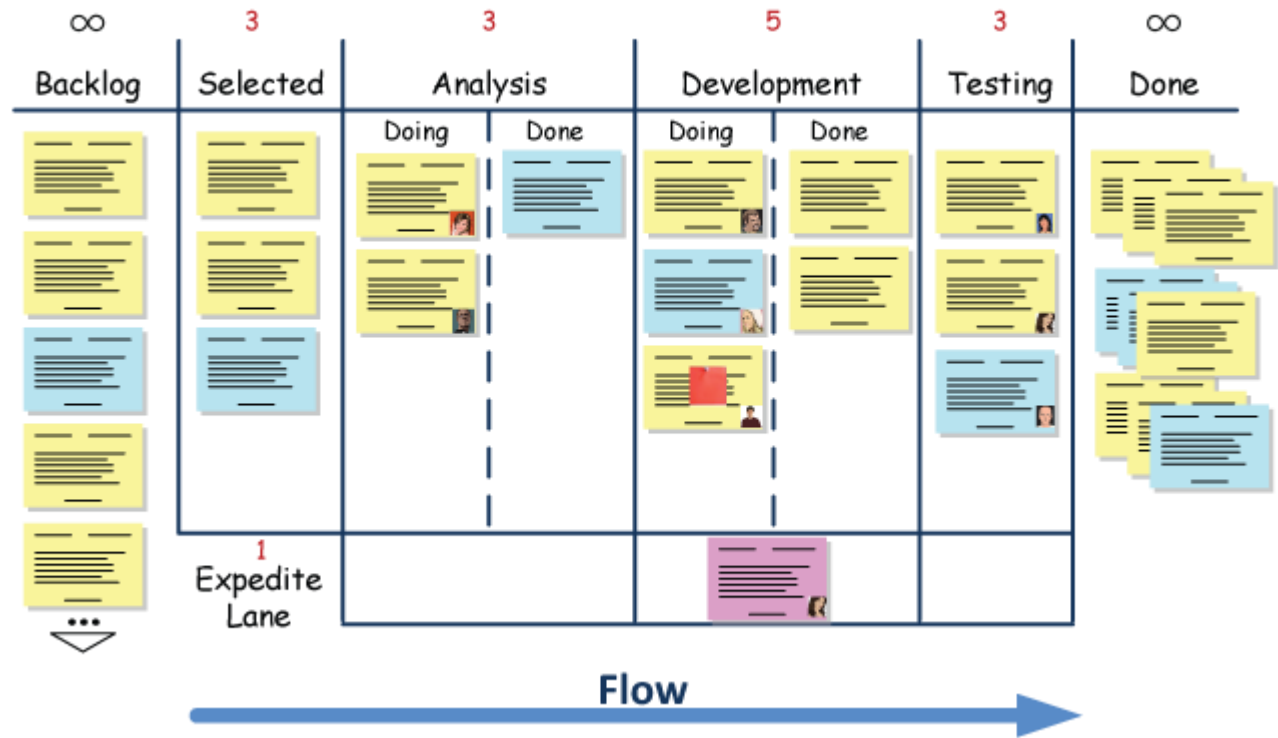
## Kanban is Japanese.

Meaning:  
Visual Board  
Sign Board

Working with a virtual  
team? Try...

Kanbanize.com  
Slack.com  
Jira

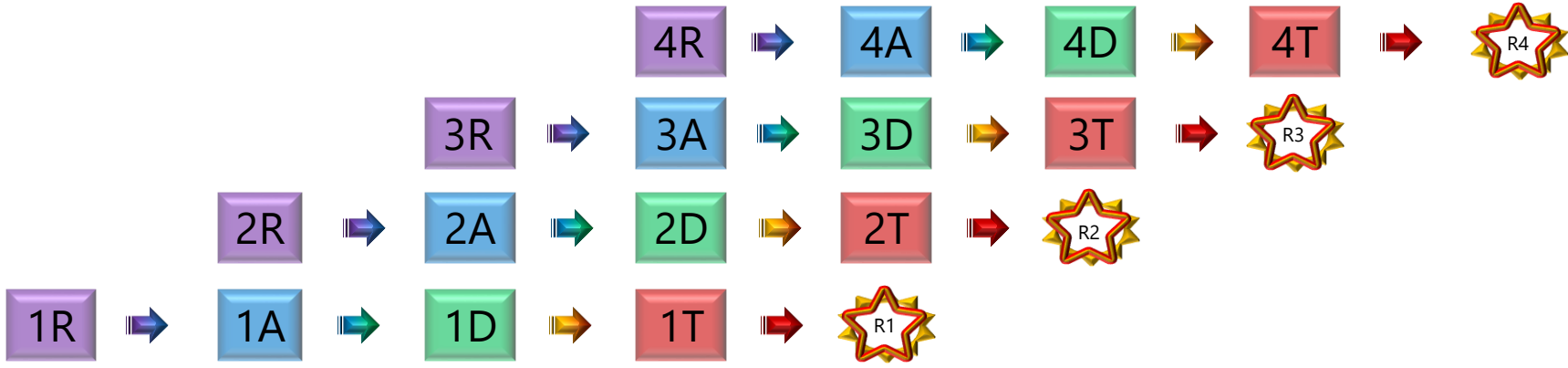
*"The ideal work planning process should always provide the development team with best thing to work on next, no more and no less."*



<https://www.cleanpng.com/png-kanban-board-scaled-agile-framework-agile-software-6109716/preview.html>



# Kanban - Concept



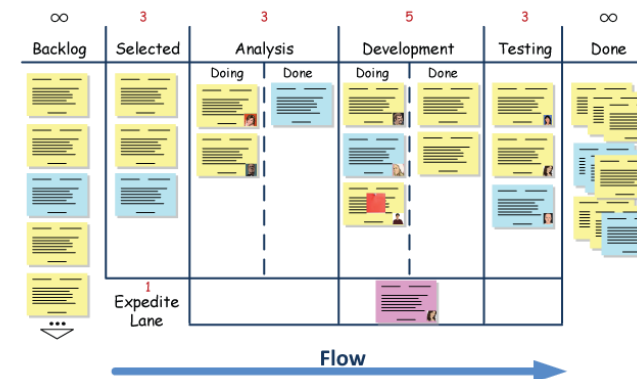
Backlog	Requirements		Analysis/Design		Development		Testing		Done
	InProgress	Done	InProgress	Done	InProgress	Done	InProgress	Done	
R1	1R	1R	1A	1A	1D	1D	1T	1T	Rls1
R2	2R	2R	2A	2A	2D	2D	2T	2T	Rls2
R3	3R	3R	3A	3A	3D	3D	3T	3T	Rls3
R4	4R	4R	4A	4A	4D	4D	4T	4T	Rls4

# Kanban – The Role of a BA

What other roles exist on the team? PM? PO? BAs?

1. Manage the backlog (if no separate PO or PM)
2. Refine feature requirements
3. Support the PM, PO
4. Translator
5. Clarify requirements during dev & test
6. Execute acceptance tests (maybe)
7. After release (add to backlog)

*"The ideal work planning process should always provide the development team with best thing to work on next, no more a*





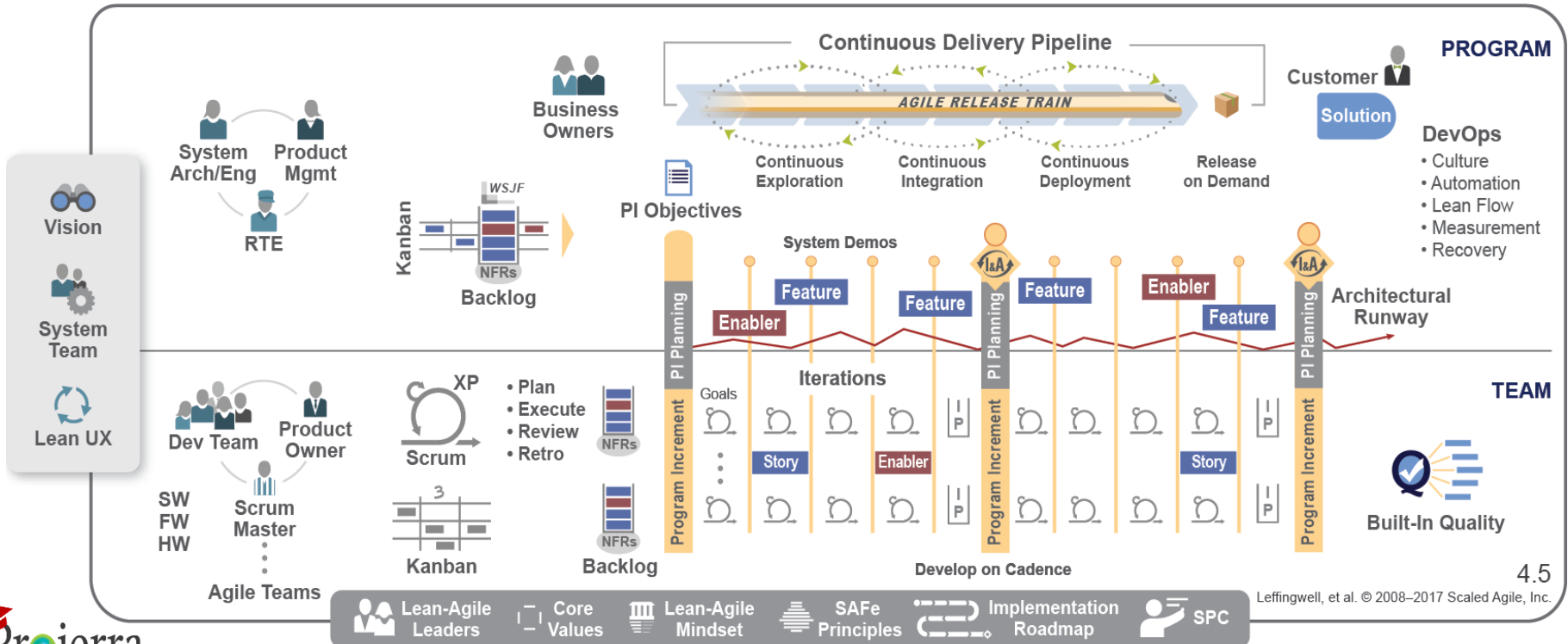
**Scrum and Kanban  
work well when team size  
is < 10 people...**

**What to do for large  
system development  
activities?**

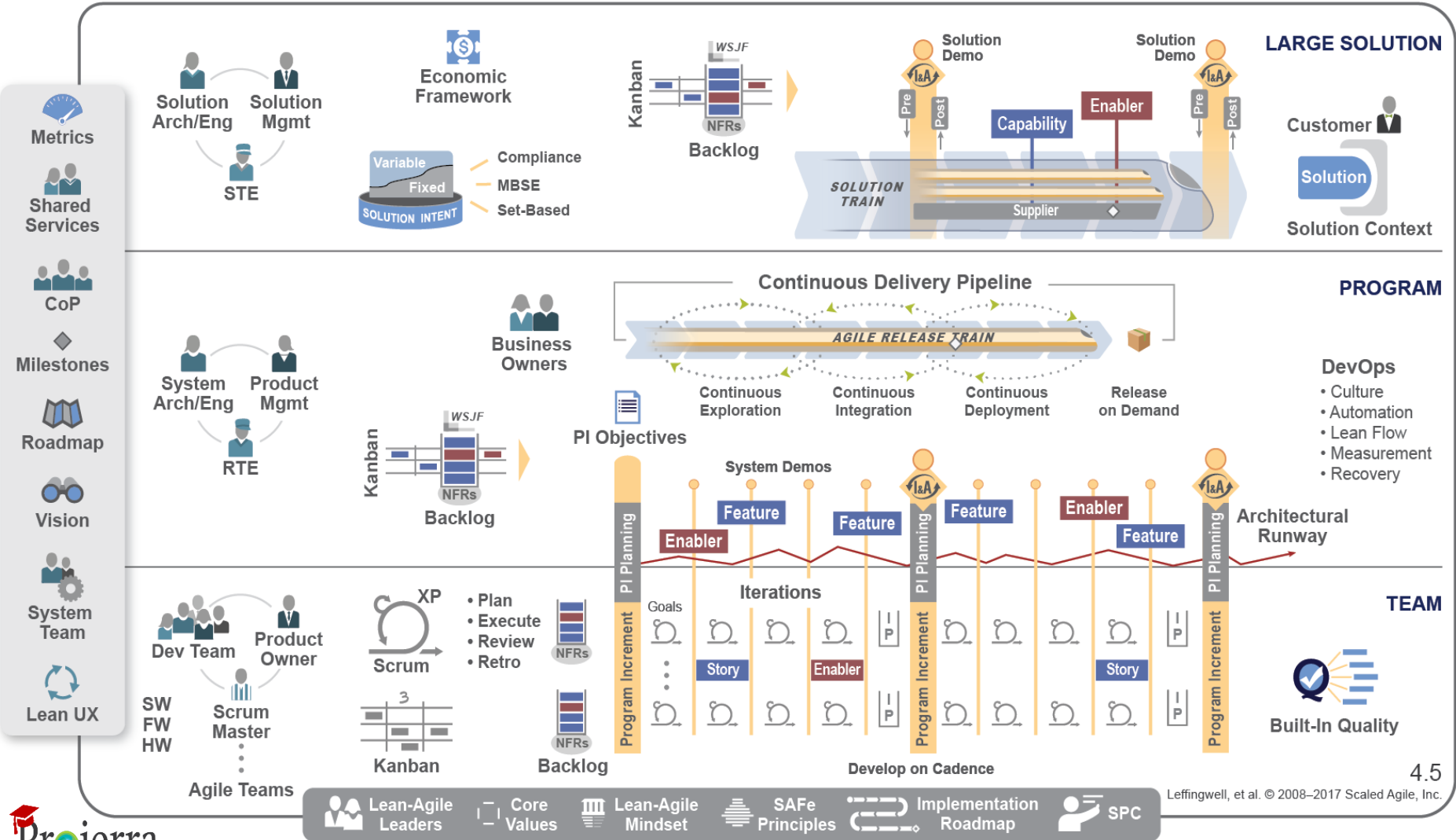
# Scaled Agile Framework (SAFe)

- Common Cadence/Architecture
- Release Train
- Understanding/Respecting Dependencies
- Vision

<http://www.scaledagileframework.com>



# Scaled Agile Framework (SAFe)



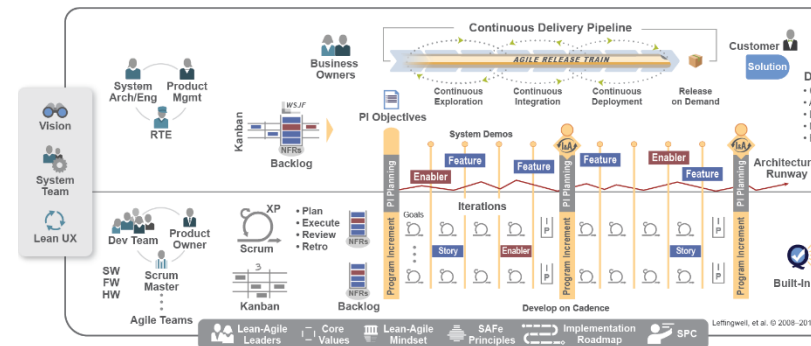
# SAFe – The Role of a BA

What other roles exist in the organization?

PM? PO? BAs?

Product Manager? Solution Manager? Business Owner?

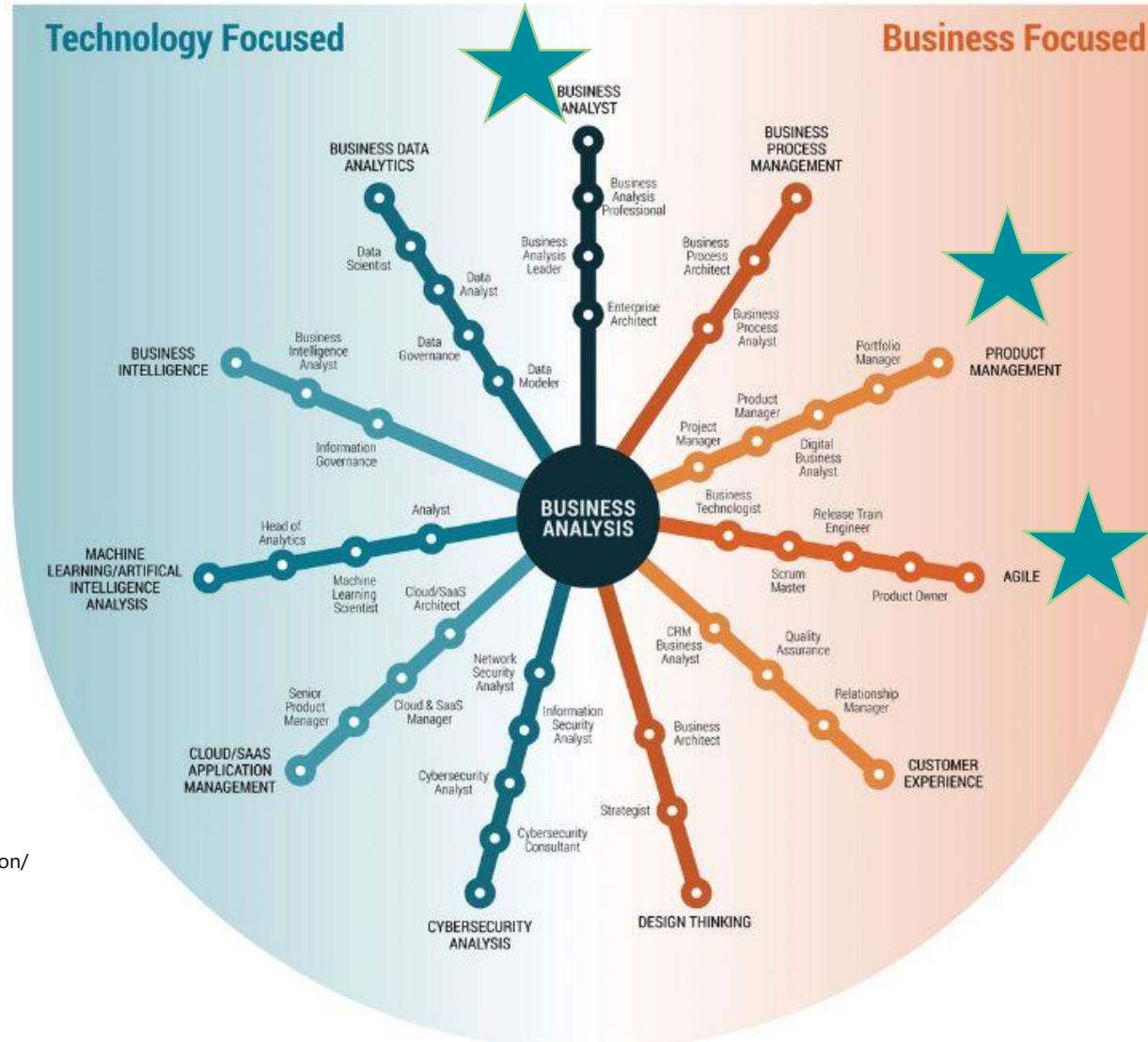
1. BA in Scrum Team
2. BA in Kanban Team
3. Product Owner / Manager
4. Solution Manager
5. Business Owner
6. Others



# Many roles of a BA

## Continuing Evolution of Business Analysis

The evolution of business analysis professionals into expanding roles depends on a combination of digital skills, business acumen, and targeted knowledge to drive better business outcomes across all industries.



<https://www.iiba.org/career-resources/business-analysis-specialization/>



# Review

	Traditional (Predictive)		Agile (Iterative, Adaptive)		
	Waterfall	Spiral (Phased)	Scrum	Kanban	SAFe
Gather& document Requirements	Full project	Each phase	Place in Backlog	One feature at a time	✓
Manage	Requirement Requirement lifecycle Requirement change	Requirement Requirement lifecycle Requirement change	Backlog	Backlog	Backlog Roadmap
Refine	Requirements	Requirements	User stories	Requirements	Multiple layers
Support Others	✓	✓	✓	✓	✓
Translator	✓	✓	✓	✓	✓
Clarify Requirements during Dev & Test	✓	✓	✓	✓	✓
Execute Acceptance Tests	?	?	?	?	?
After Release	Benefit Realization ?	Benefit Realization ?	Add to backlog	Add to backlog	Add to backlog

# Key Takeaway

- There are no fixed rules about project approaches or the role of a BA.
- Project approach depends upon context
  - Industry
  - Socio-Economic Factors
  - Risk sensitivity/tolerance
  - Other
- Role of BA depends upon
  - Project approach & size
  - Project Complexity
  - Team approach/ & size
  - Technology
  - Other







# Projerra

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