



Successful Agile teams understand how to do Analysis

Jaco Viljoen | IndigoCube | jaco@indigocube.co.za

www.indigocube.co.za | info@indigocube.co.za





JACO VILJOEN

Principal Consultant



Agenda

- Analysis as Value Management
- Agile Toolbox for Analysis
- Build Consensus through Collaboration
- Summary



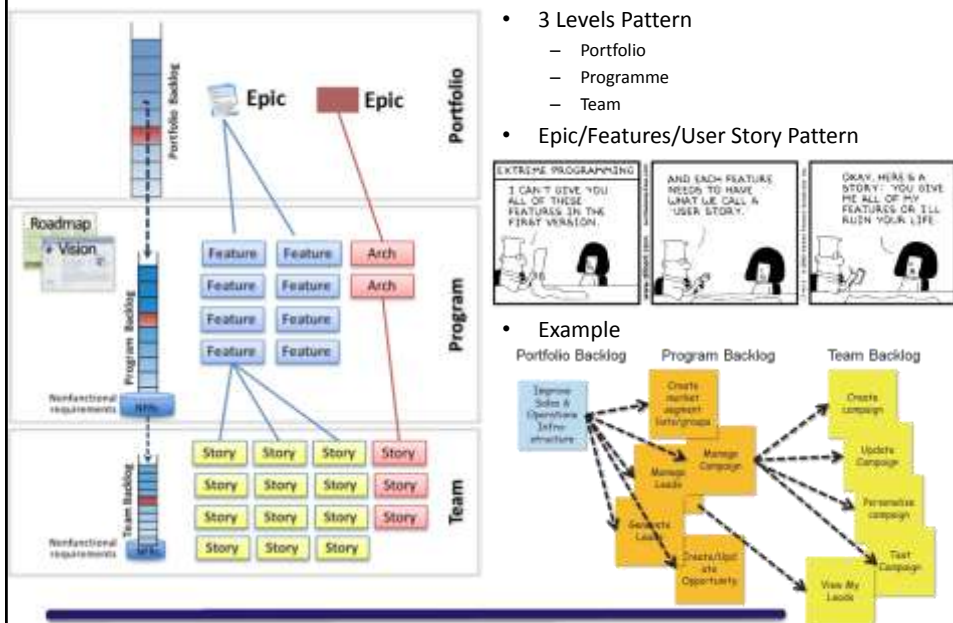
Value Management

- A more holistic view of analysis that:
 - Group all analysis related skills, together with some project- and product management techniques
 - Shows how analysis contributes to the overall effort and better positions analysis as a means to an end
- A collaborative process of getting the best solution to the problem delivered in the nearest term possible
 - It's not just about taking orders, it's about balancing capability and capacity against the next most important things to the business
 - It's much bigger than order taking and producing documents

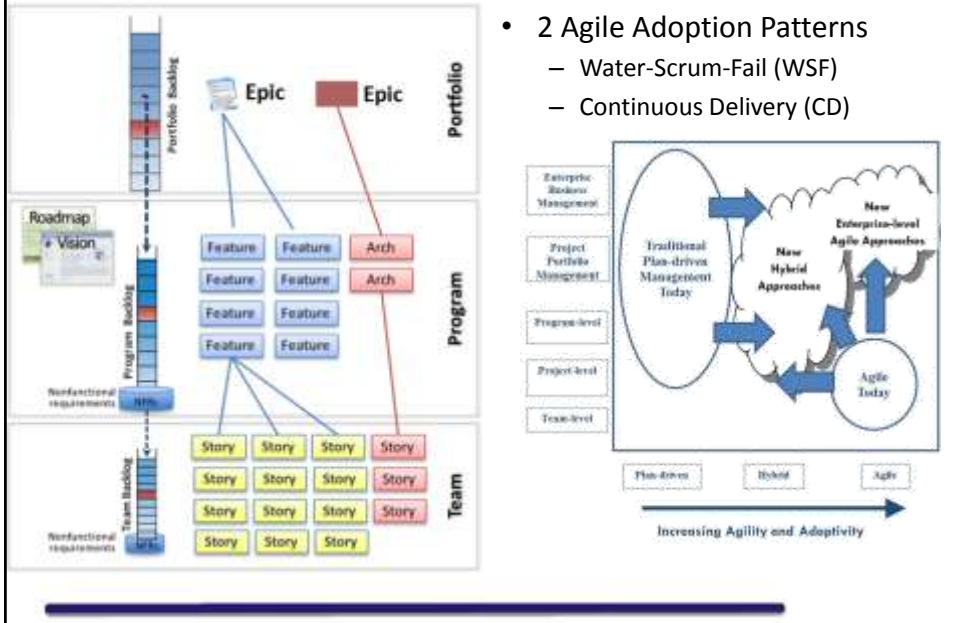
Analysis as a task, not a phase



Value Management at Multiple Levels

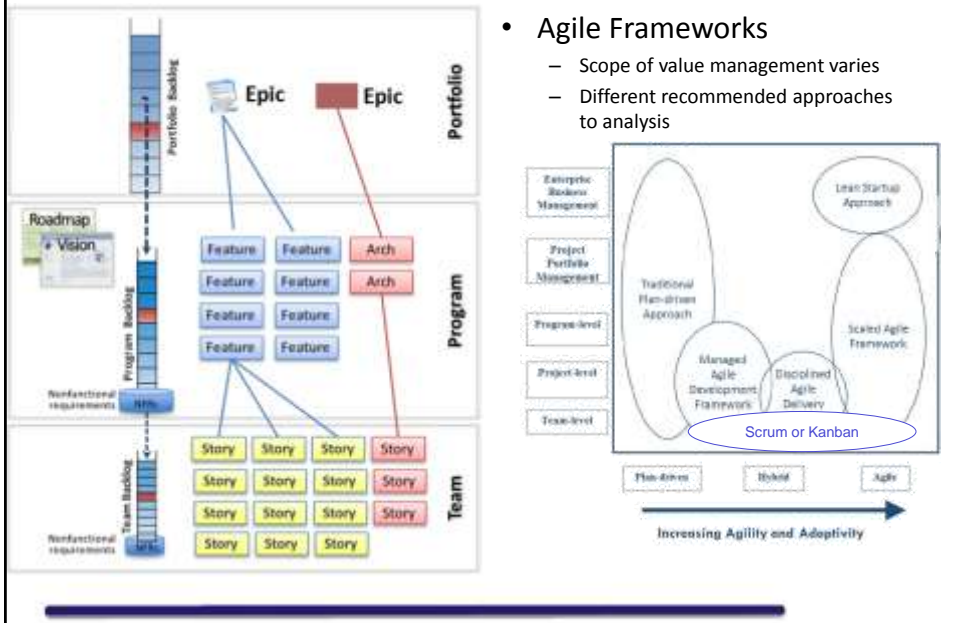


Value Management at Multiple Levels



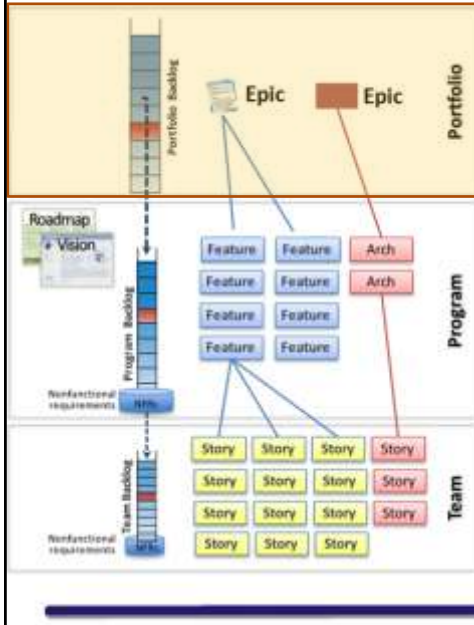
- 2 Agile Adoption Patterns
 - Water-Scrum-Fail (WSF)
 - Continuous Delivery (CD)

Value Management at Multiple Levels



- Agile Frameworks
 - Scope of value management varies
 - Different recommended approaches to analysis

Value Management at Portfolio Level

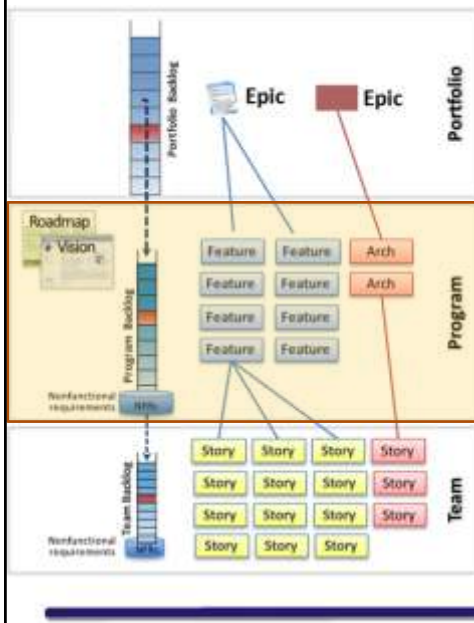


- Value management at the Portfolio level is about:
 - Identifying the strategy of the organization
 - Implementing that strategy through a collection (or portfolio) of initiatives (Epics)
- Typical Portfolio Process
 - Visualise with Kanban Board

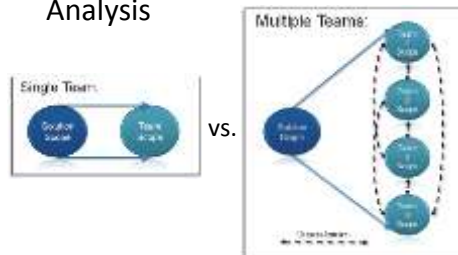
New Ideas	Strategic Alignment	Analyze Initiatives	Portfolio Backlog	Implement
<ul style="list-style-type: none"> New opportunities Cost savings Marketplace changes Mergers/Acquisitions Problems with existing systems 	<ul style="list-style-type: none"> Assess new ideas for strategic alignment 	<ul style="list-style-type: none"> Scope initiatives Identify solution options Determine if problem is worth solving Determine if solution is worth it 	<ul style="list-style-type: none"> Engaged for implementation Revised on regular basis based on changing needs and environment 	<ul style="list-style-type: none"> Team(s) identified to deliver solution

- Epics/Initiative/Project/CR
 - Which do you prefer?

Value Management at Program Level



- Plan-driven or Agile Program
 - Plan-driven = BURS (WSF)
 - Agile = Vision and Roadmap
- Single- or Multiple Team Analysis



- Feature vs. component teams
- How to handle dependencies?

Value Management at Team Level

The diagram illustrates value management across three levels: Portfolio, Program, and Team. At the Portfolio level, there are two Epic items. At the Program level, these Epics are broken down into Features and Architecture (Arch). At the Team level, these are further decomposed into individual Stories. A circular diagram on the right represents a timeboxed cycle, with a 2-4 week duration and a 24-hour daily cycle, involving Product Backlog Management and Release Planning.

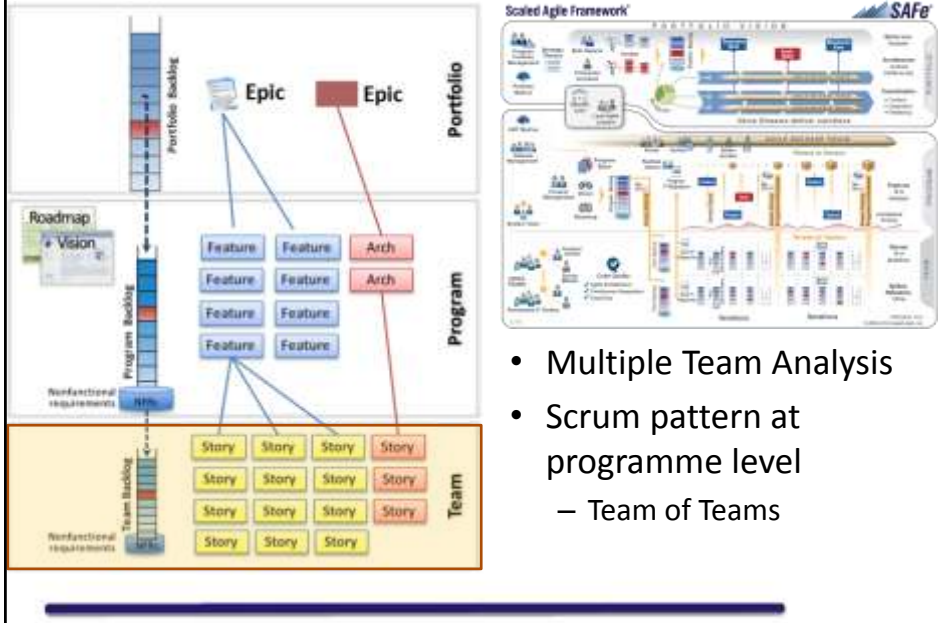
- Single Team Analysis
 - Timeboxed
 - Product Backlog Management

Value Management at Team Level

This diagram is identical to the one above, showing the hierarchy from Portfolio (Epics) to Program (Features/Arch) to Team (Stories). The circular diagram on the right is replaced by a Kanban board example titled 'Kanban kick-start example'. The board has columns for Next, Analysis, Development, Acceptance, and Prod. Below the board are instructions for 'Feature / story', 'Task / defect', and 'What to pull first'.

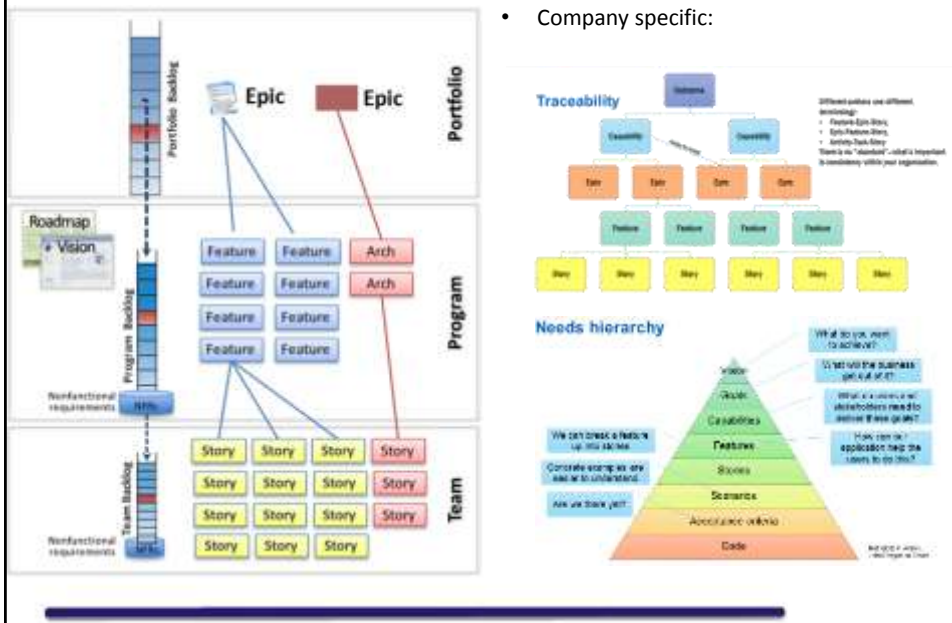
- Single Team Analysis
 - Continuous flow

Value Management at Team Level



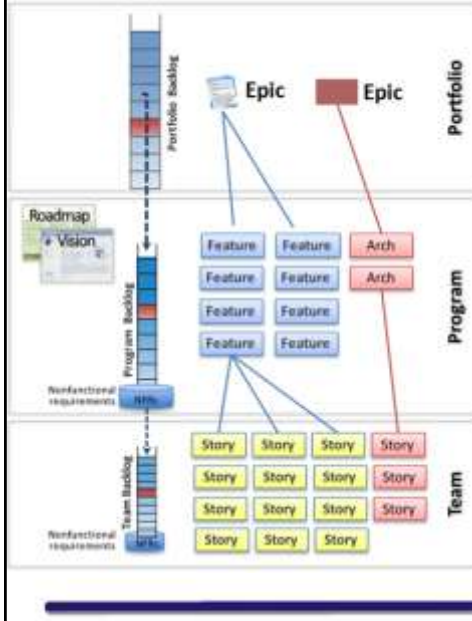
- Multiple Team Analysis
- Scrum pattern at programme level
 - Team of Teams

Enterprise Backlog Model



- Company specific:

Enterprise Backlog Model

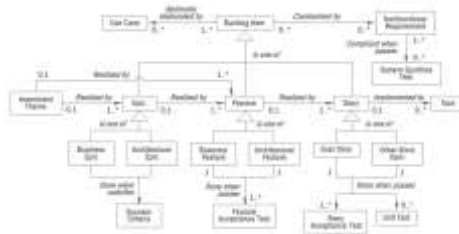


- Framework specific:

- XP/Scrum



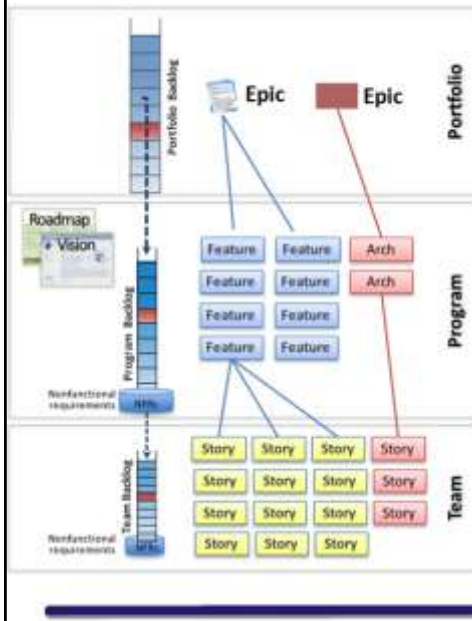
- Agile Software Requirements Model (SAFe)



<http://www.scaledagileframework.com/agile-software-requirements-model/>



Enterprise Backlog Model



- Industry specific:

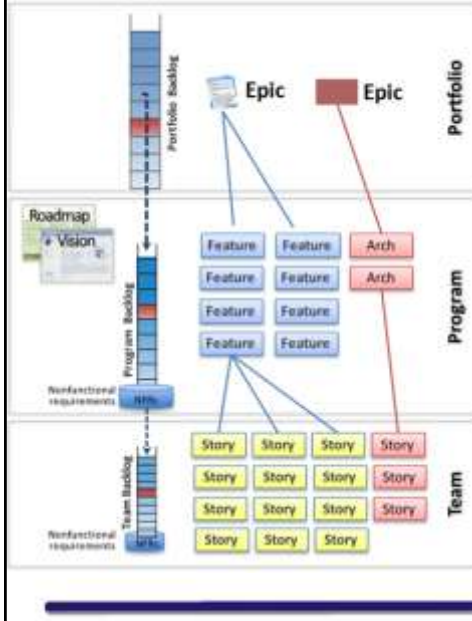
- BABOK 3.0



Version 3.0 of the BABOK Guide was released in 2010



Enterprise Backlog Refinement

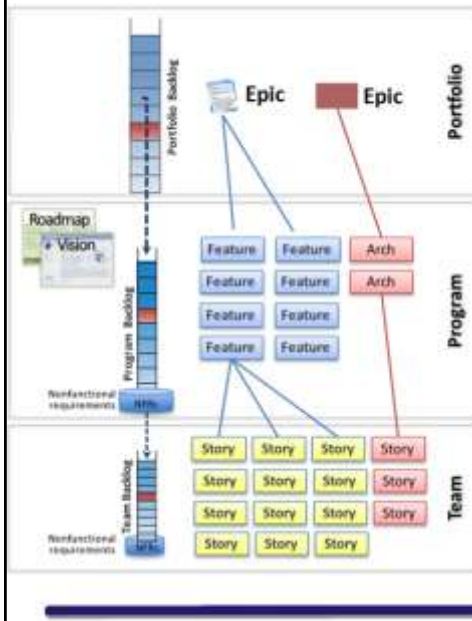


- Continuous top down refinement
- Activities:
 - Deciding what to put on the backlog via decision filters
 - Grouping the backlog
 - Sequencing the backlog
 - Identify different types of backlog items
 - Further describing backlog items
 - Visualizing backlog refinement

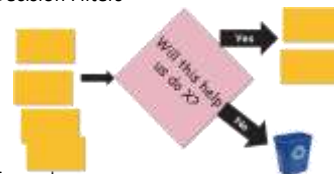
1. Filter backlog
2. Group backlog
3. Sequence backlog



Enterprise Backlog Refinement



1. Filter backlog
 - Decision Filters



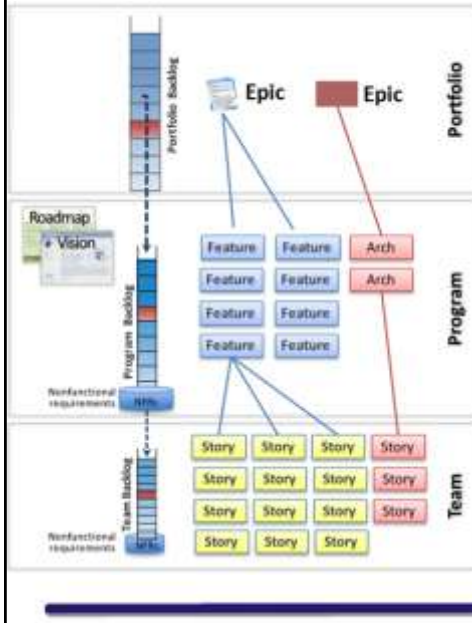
– Example



2. Group backlog
3. Sequence backlog



Enterprise Backlog Refinement



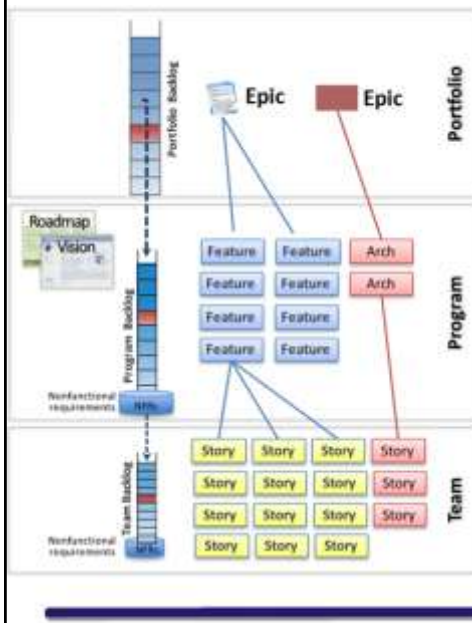
1. Filter backlog
2. Group backlog



3. Sequence backlog



Enterprise Backlog Model



1. Filter backlog
2. Group backlog
3. Sequence backlog
 1. Sequencing based on Weighted Shortest Job First (SAFE)

$$WSJF = \frac{\text{User/Business Value} + \text{Time Criticality} + \text{RR/OE Value}}{\text{Job Size}}$$

Feature	User/Business Value	Time Criticality	RR/OE Value	Job Size	WJIF
Session Proposal	13	13	3	8	3.6
Review Session	8	5	2	5	3
Public Commenting	1	1	1	5	0

2. CD3 Score (www.blackswanfarming.com)

$$CD3 \text{ Score} = \frac{\text{Value} + \text{Urgency} + \text{Information discovery value}}{\text{Duration}}$$

The diagram shows 'Cost of Delay' in a red box, with arrows pointing to it from 'Value', 'Urgency', and 'Information discovery value'. Below it, 'Duration' is in a black box, with an arrow pointing to it from the 'Cost of Delay' box.

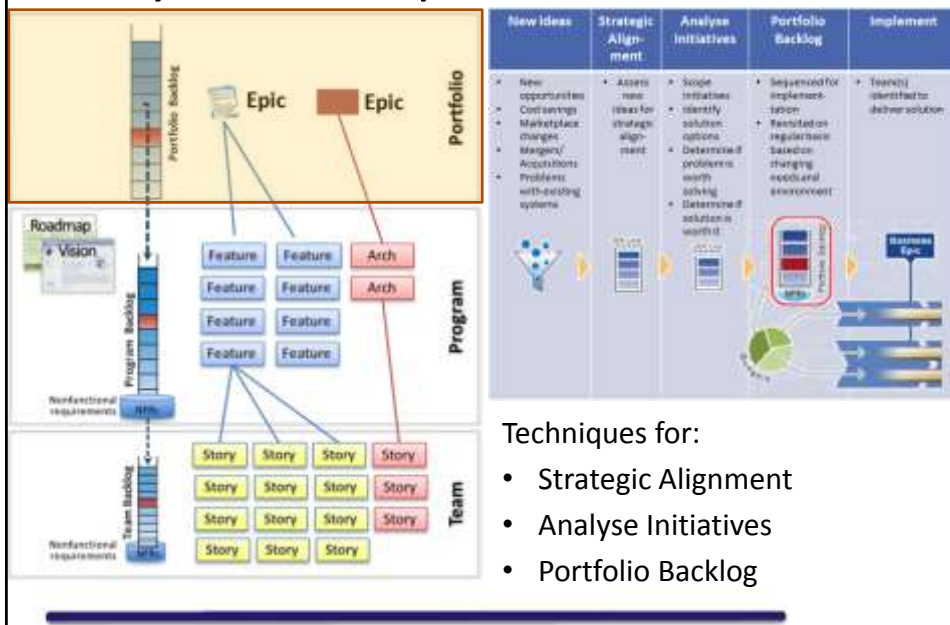


Analysis and Value Management

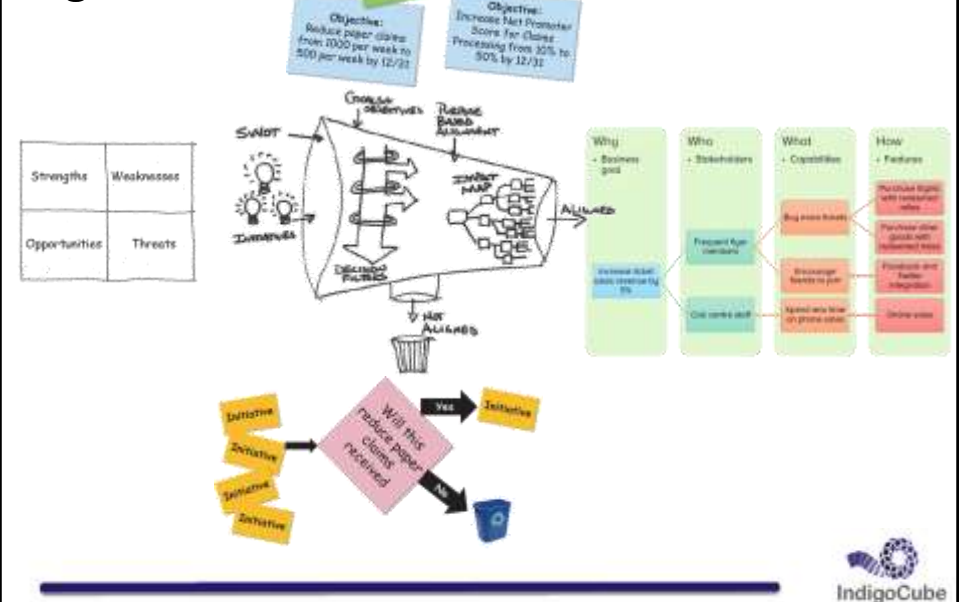
- Analysis techniques are critical for successful value management
- Toolbox
 - Use what is appropriate in context
- Favour collaborative analysis techniques
 - User Story workshop
 - Use Case workshop
 - Impact mapping in front of whiteboard
- But older techniques still work



Analysis Techniques at Portfolio Level



Strategic Alignment



Analyse Initiatives

- Establish Context

Technique	Information Provided
Problem Statement	Problem to solve, who it impacts, the effect of the problem, characteristics of a solution.
Context Diagram	External organizations, people, and systems impacted by the change interfaces with those impacted.
High Level Process	Essential processes impacted by the initiative

The problem of	[describe the problem]
affects	[the stakeholders affected by the problem]
the impact of which is	[what is the impact of the problem?]
A successful solution would be	[list the critical benefits or key capabilities that the solution – however implemented – must have to be successful]



- Business Case

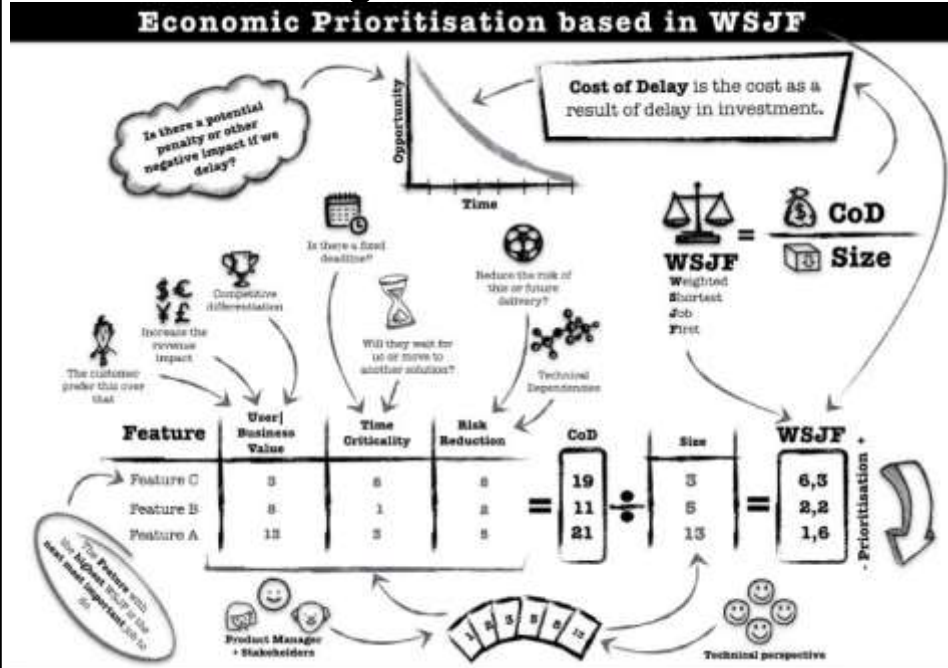
$$\text{Value} = \frac{\text{Needs Satisfaction}}{\text{Usage of Resources}}$$

What outcomes are our stakeholders looking for? (points to Needs Satisfaction)

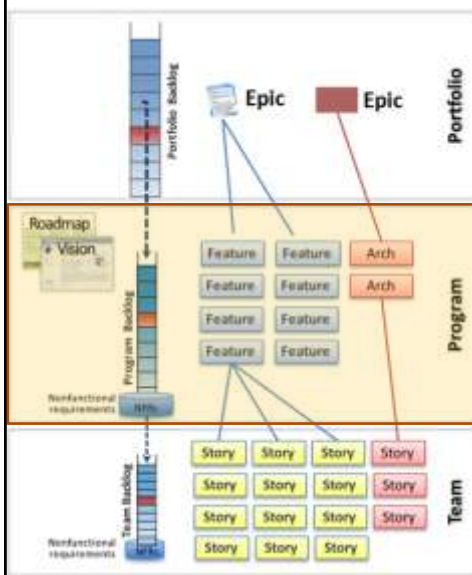
Everything required to meet these needs (points to Usage of Resources)



Portfolio Backlog



Analysis Techniques at Program Level



Techniques for:

- Vision
 - Ways to convey Vision
 - Identifying Features
- Roadmap

Vision

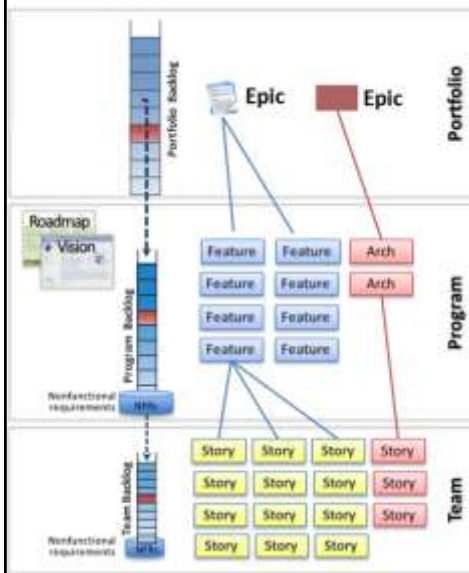
- Ways to convey Vision:
 - Product Vision Box
 - Product name
 - Graphic representation of the product
 - 3 - 4 key features
 - Key operating requirements
 - Problem Statement
 - Describe the purpose
 - Elevator pitch



The problem of affects	Selecting conference sessions presenters
the impact of which is	they frequently do not receive actionable feedback on their session proposals nor know why they were/were not selected.
A successful solution would be	<ul style="list-style-type: none"> • Open and transparent • Provide presenters with actionable feedback on their proposals • Allow presenters to revise their proposals to improve their chances of being selected.

IndigoCube

Vision

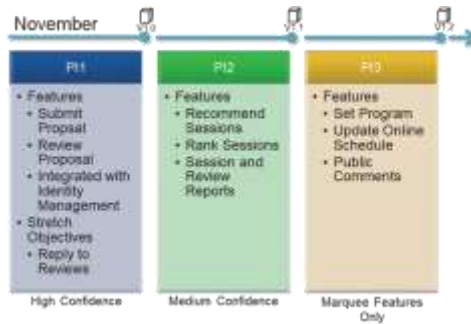


- Ways to identify features:
 - Impact Mapping
 - Domain Modelling
 - Use Case Modelling

IndigoCube

Roadmap

- SAFe Roadmap
 - Showing when features are targeted for delivery



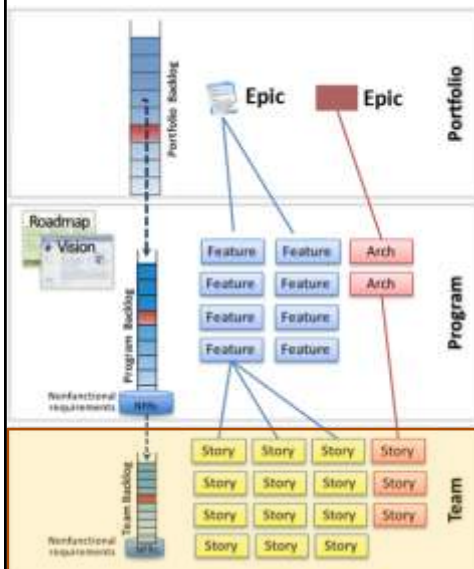
- Story Mapping
 - Useful technique for placing backlog items in context



IndigoCube

Analysis Techniques at Team Level

- Ways to identify features:
 - Elaborate features



Traditional Techniques still works

	Data (Attributes and Entities)	External Agents (or actors)	Processes (or use cases)	Business Rules
Business Requirements	<ul style="list-style-type: none"> Process Text Template ERD 	<ul style="list-style-type: none"> Process Text Template Context Level Dataflow Diagram 	<ul style="list-style-type: none"> Process Text Template Process Decomp User Story Workflow 	<ul style="list-style-type: none"> Decision Table Text Statements ERD
Functional Requirements	<ul style="list-style-type: none"> Process Text Template Prototype ERD Workflow Use Case Description 	<ul style="list-style-type: none"> Use Case Diagram Workflow (Swimlane) Prototypes 	<ul style="list-style-type: none"> Use Case Diagram Use Case Narrative Prototype Workflow 	<ul style="list-style-type: none"> Decision Table Text Statements ERD Use Case Description Workflow
Solution Requirements	<ul style="list-style-type: none"> Prototype ERD 	<ul style="list-style-type: none"> Interface diagrams 	<ul style="list-style-type: none"> User Interface Specification Program Specification Design Document 	<ul style="list-style-type: none"> Decision Table ERD

IndigoCube

Summary

- Analysis as Value Management
- Agile Toolbox for Analysis
- Build Consensus through Collaboration



LET'S GET SOCIAL!



[/company/indigocube.co.za](https://www.linkedin.com/company/indigocube.co.za)



[@IndigoCube](https://twitter.com/IndigoCube)

