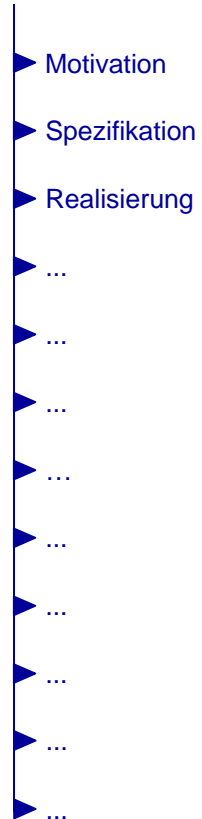




Architecture Engagement Purposes

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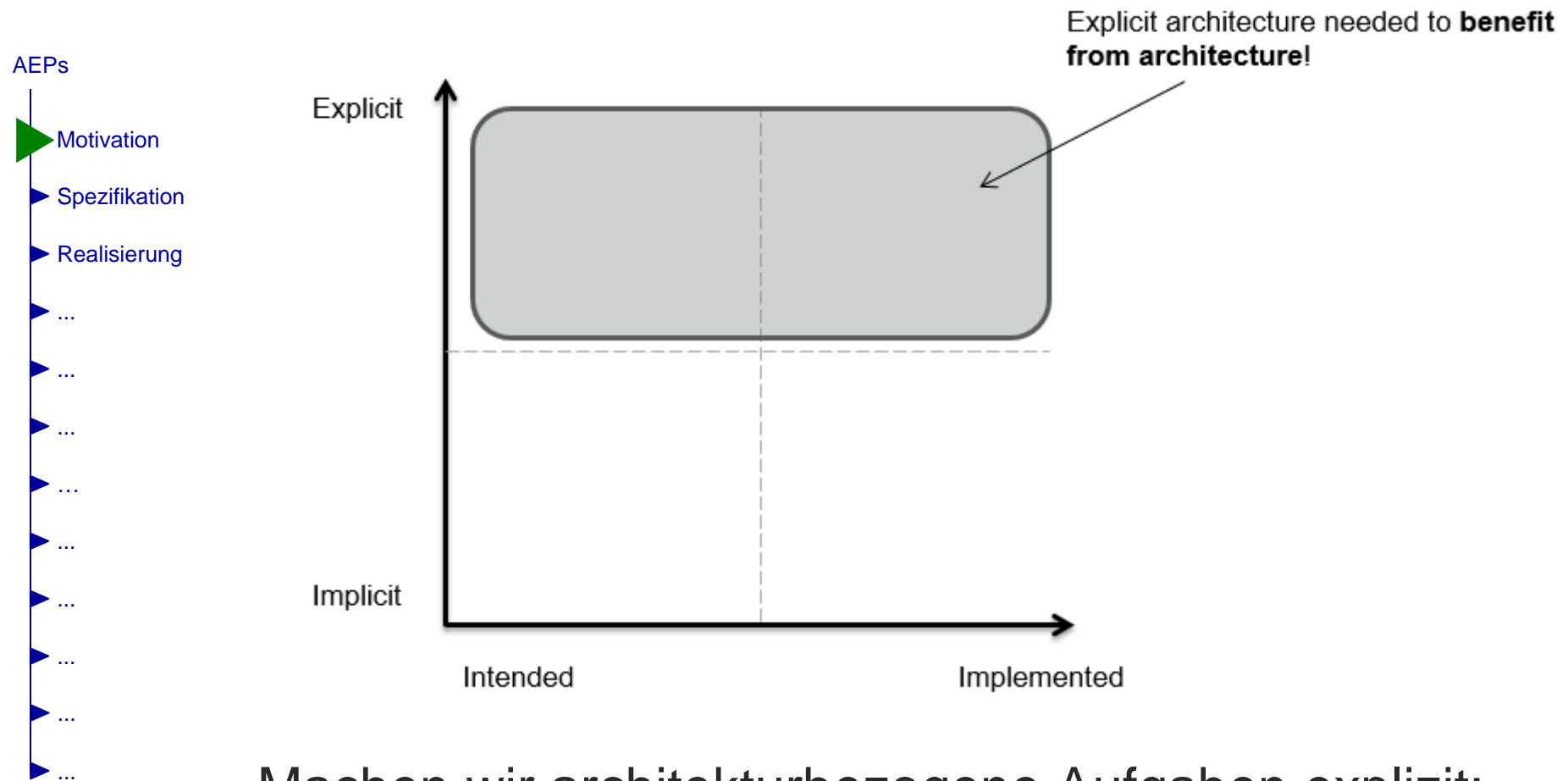
AEPs



- Motivation
- AEP-Spezifikation
- AEP-Realisierung



Voraussetzung: Was brauchen wir?



Machen wir architekturbezogene Aufgaben explizit:
Architecture Engagement Purposes (AEPs)



AEP-Spezifikation

AEPs		
	Name	The name of the architecture engagement purpose, typically with a unique ID to distinguish one AEP from the other.
Motivation	Purpose	The goal of the AEP which drives all architecting activities related to the AEP
Spezifikation	Lifecycle Trigger	The trigger in one of the none-architecting activities in the product lifecycle, which requires the architect to become actively involved in the product lifecycle.
Realisierung	Lifecycle Impact	One or many none-architecting activities in the product lifecycle, which potentially are affected by the work of the architect.
...	Constraints	<ul style="list-style-type: none">• Constraints in Time (absolute or relative)• Constraints in Budget (absolute or relative)• Constraints in Value/Quality
...	Level of Confidence	The required level of confidence indicates when the goal of the AEP has been achieved. This means we have to perform architecting until we achieve the goal with the desired level of confidence or one of the limitations strikes, which leaves two options: <ul style="list-style-type: none">• Negotiate: the architect negotiates the limitations with management because of the goal importance• Defer: the architect defers further architecting and gets along with level of confidence achieved so far but keeps the AEP in the backlog for later processing
...	Confidence Measure	The confidence measure guides the assessment whether or not the required level of confidence has been achieved – ideally objectively measurable – in practice it is often a subjective measure or stakeholder agreement.



Übungsbeispiel

- Erstellen Sie eine AEP-Spezifikation für die Verteilung Ihres NIM-Spieles

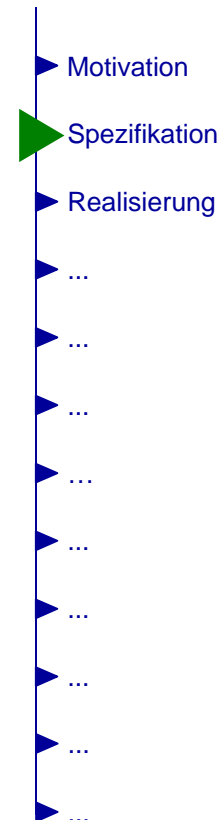
AEPs

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Beispielhafte Lösung

AEPs



Name	NIM-Verteilung
Purpose	Migration des NIM-Spiels zu einer Variante, die man verteilt im Netzwerk spielen kann
Lifecycle Trigger	Anforderungsanalyse: architekturelevante Änderung
Lifecycle Impact	Änderung muss implementiert werden Änderung muss getestet werden
Constraints	5 PT
Level of Confidence	Übereinstimmung zwischen Architekt und Entwickler, dass das Konzept funktioniert
Confidence Measure	Übereinstimmung ist schriftlich fixiert



AEP-Realisierung

Architecting Activities	
Name	Individual name of the architecting activity, typically with a unique ID to distinguish one activity from the other.
Category	We distinguish the following categories of activities: <ul style="list-style-type: none">• Investment• Prediction• Derivation• Control
Effort	The range or the exact amount of effort available.
Due Date	The timeframe or the exact due date .
Precondition	Conditions which need to be fulfilled to start the individual architecting activity (e.g., another activity to be completed).
Postcondition	Conditions which need to be fulfilled to stop the individual architecting activity (e.g., 25% of stakeholder in testing have been interviewed, more than n architecture scenarios have been elicited, architecture model has been approved, decision for X has been made).
Detailed Description	The detailed description gives space for description of the activity and links to related (architectural) artifacts
Status	The status of the activity (not started, in progress, accomplished)



Typische architekturenspezifische Aktivitäten

	Prediction	Derivation	Control
Basic	<ul style="list-style-type: none">• What-if Discussions• Manual Impact Analyses	<ul style="list-style-type: none">• Decomposition• Assignments• Understanding• Guidance (Architectural Rules)• Navigation	<ul style="list-style-type: none">• Integration• Systematic Code Reviews
Advanced	<ul style="list-style-type: none">• Architectural Prototypes• Quantified Impact Analyses (semi-automatic)	<ul style="list-style-type: none">• Customized Documentation• Task-specific Guidelines	<ul style="list-style-type: none">• Compliance Checking• Metric Trend Analysis
Specialized	<ul style="list-style-type: none">• Effort Estimations• Model-based Simulations	<ul style="list-style-type: none">• Model-based Artifacts Generation (Code, Test Cases, etc.)	<ul style="list-style-type: none">• Live Feedback• Continuous Quality Assurance



Übungsbeispiel

- Überlegen Sie sich architekturspezifische Aktivitäten für die Verteilung des NIM-Spiels

AEPs

Architecting Activities				
Name				
		Prediction	Derivation	Control
Category	Basic	<ul style="list-style-type: none"> • What-if Discussions • Manual Impact Analyses 	<ul style="list-style-type: none"> • Decomposition • Assignments • Understanding • Guidance (Architectural Rules) • Navigation 	<ul style="list-style-type: none"> • Integration • Systematic Code Reviews
Effort				
Due Date	Advanced	<ul style="list-style-type: none"> • Architectural Prototypes • Quantified Impact Analyses (semi-automatic) 	<ul style="list-style-type: none"> • Customized Documentation • Task-specific Guidelines 	<ul style="list-style-type: none"> • Compliance Checking • Metric Trend Analysis
Precondition				
Postcondition	Specialized	<ul style="list-style-type: none"> • Effort Estimations • Model-based Simulations 	<ul style="list-style-type: none"> • Model-based Artifacts Generation (Code, Test Cases, etc.) 	<ul style="list-style-type: none"> • Live Feedback • Continuous Quality Assurance
Detailed Description				
Status				



Beispielhafte Lösung

Architekturspezifische Aktivitäten

Name	Architektur definieren	Angemessenheit der Architektur prüfen	Implementierung migrieren	Architekturkonformität prüfen
Category	Investment	Prediction	Derivation	Control
Effort	0,5 PT	0,5 PT	3,5PT	0,5 PT
Due Date	1.7.13	2.7.13	4.7.13	5.7.13
Precondition	Anforderungen klar	Architekturmodell ausreichend	Übereinstimmung, dass das Konzept funktioniert	Implementierung abgeschlossen
Postcondition			Implementiert und getestet	Keine Verletzungen
Detailed Description	Szenarien, Architekturmodelle	Walkthrough	Modelle für die Entwicklungssicht	
Status	Nicht begonnen	Nicht begonnen		Nicht begonnen