

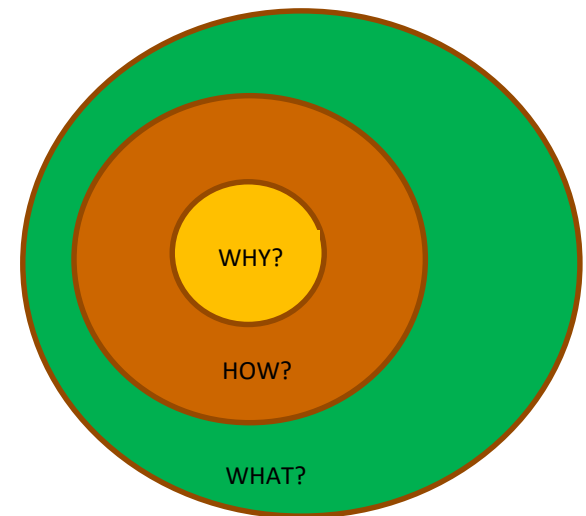


COSMIC FSM ADOPTION AT EUROFINS

IWSM 2019

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Usha N

- History behind COSMIC Adoption
- The journey of COSMIC Implementation @Eurofins
- Challenges and learnings



Who Am I?



Engineering Leader @ Eurofins

Healthcare IT and Life Sciences



Sport Enthusiast with Family Ethos

Who We Are..

- Eurofins Scientific is an international life sciences company which provides a unique range of analytical testing services to clients across multiple industries
- Over **€4 billion** in annualized revenues
- An international network of more than **800** laboratories across **47** countries in Europe, North and South America and Asia-Pacific
- Around 45000 employees and more than 400 million tests performed year
- An international network of more than **800** laboratories across **47** countries in Europe, North and South America and Asia-Pacific
- A portfolio of over 200,000 validated analytical methods
- **1,250,000 m²** of laboratories

Customer Focus, Quality, Competence & Team Spirit and Integrity

Situation



- Predictability of release
- Productivity comparison
- Quick and Early estimation for new projects
- Business-IT Alignment
- Minimal disruption to business

Complication

- Varied degree of IT Maturity
- Agility as excuse. Story point not an absolute unit
- Business requirements not well structured.



Resolution

Need to have standard based common unit of Measure, consistent across the organization



How did we chose COSMIC FP as FSM



Approach



- SIG formed
- AS-IS Mapping of Projects @ Eurofins
- Deep Dive of chosen FSM methods
- Map analyzed FSM methods for best Fit

Considered for Pilot



- Parameters for evaluation
- 50% of Program leadership interviewed
- COSMIC FP, IFPUG FPA, FiSMA, Agile SP analyzed
- Map analyzed FSM methods for best Fit

Why COSMIC the Chosen one

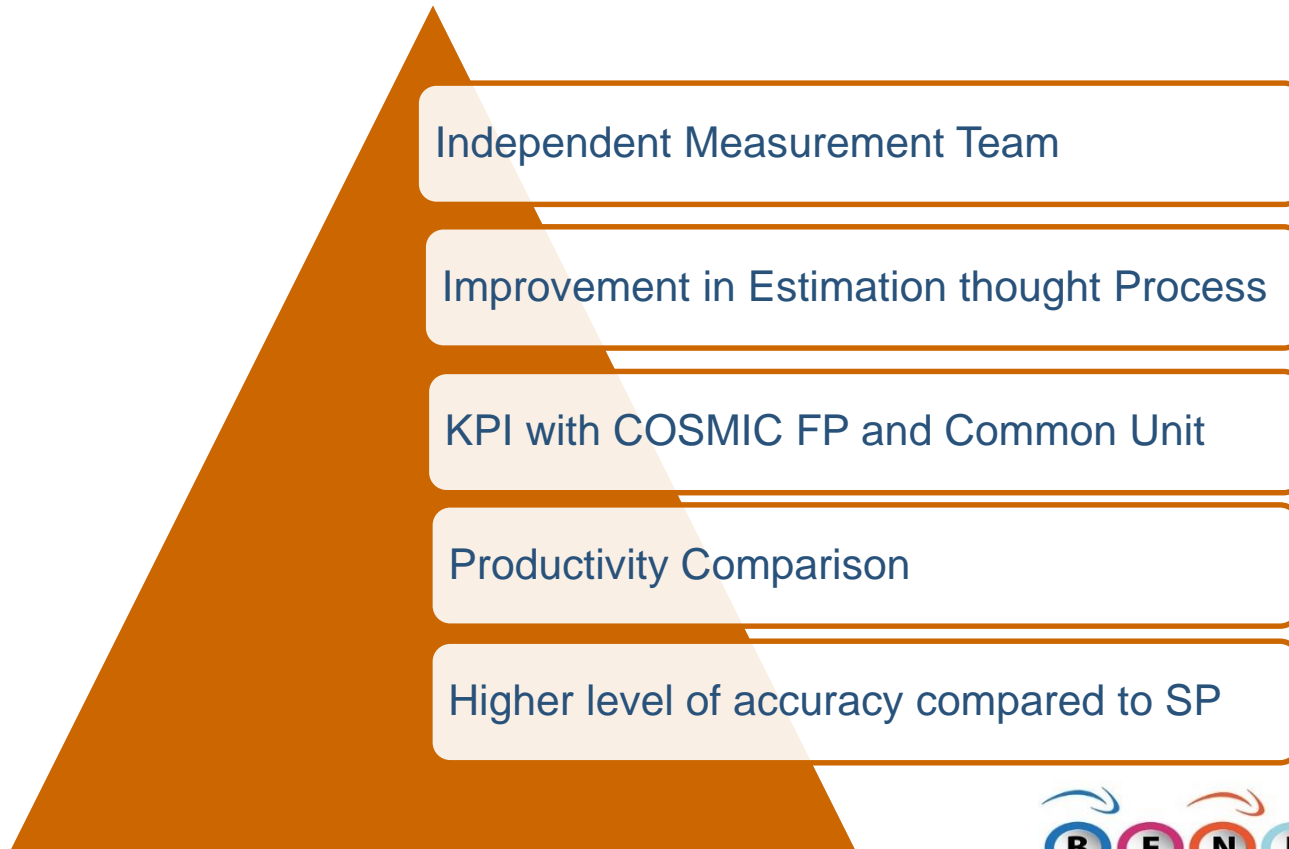
- Best fit on parameters relevant to Eurofins situation
- Easy to learn, cost-effective to implement

Goal : Method to consistently measure the developed software for Baselineing and Benchmarking. Model for upstream estimation for Projects that suites Eurofins Practice

- Model Development
- Agile Team Mindset
- Busy Schedule
- Who will measure
- Measuring Non core work



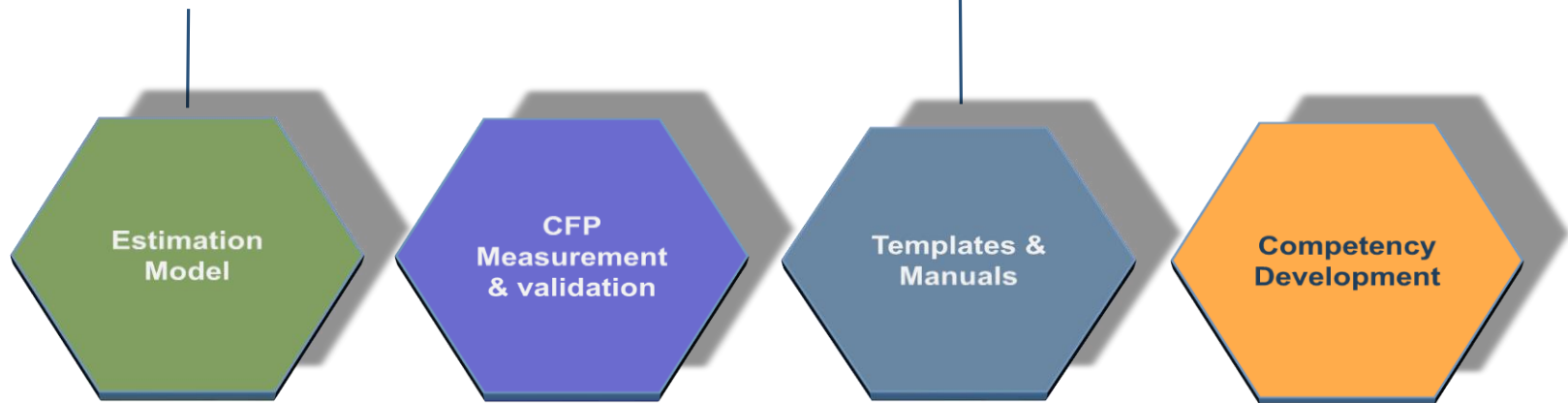
Benefits Observed with Pilot Adoption



Outcome with the Pilot – Ready for Organization wide Adoption

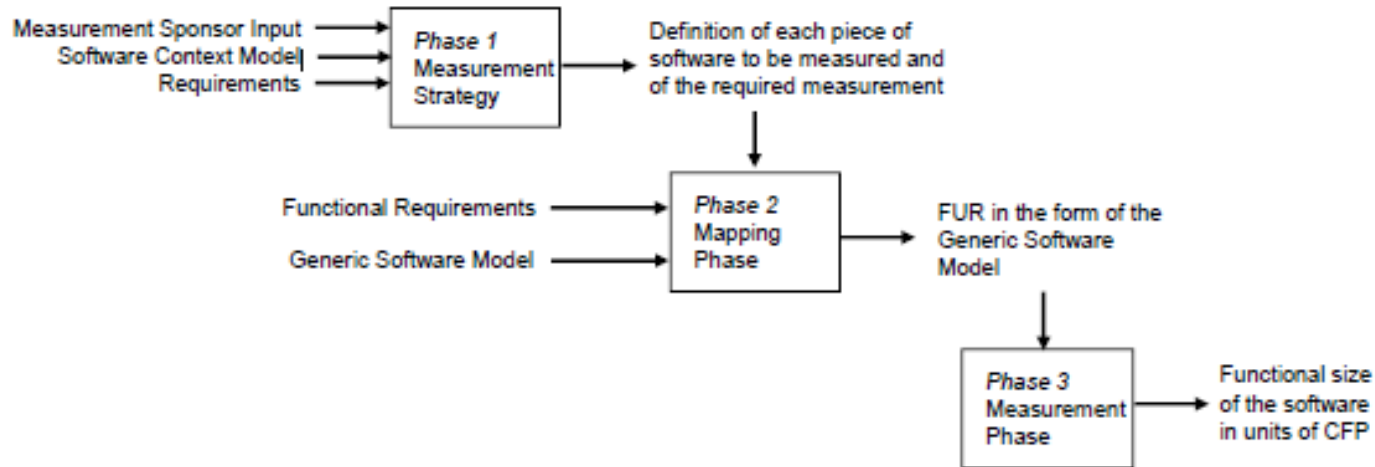
- Templates for
 - CFP Measurement
 - Approximate Estimation
 - Calibration of baselines

- COSMIC FP Measurement Manual
- Checklist for measurement process audit.
- Governance Model

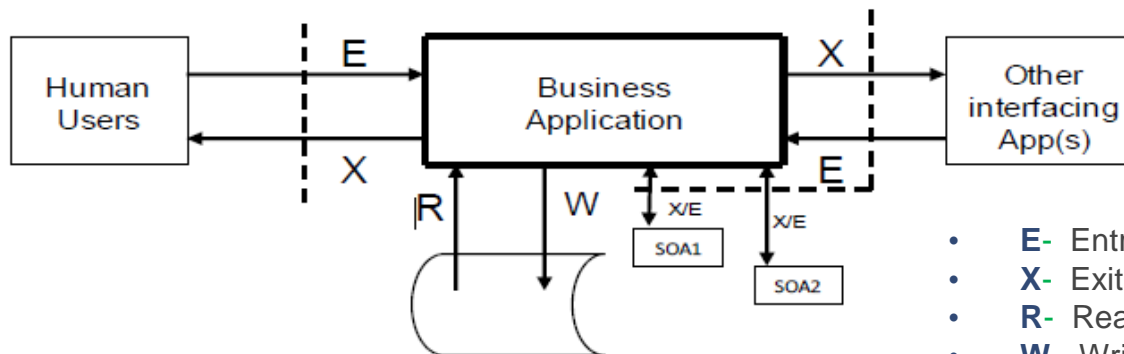


- Independent Measurement Team
- 8 Pilots with New Development and Enhancement

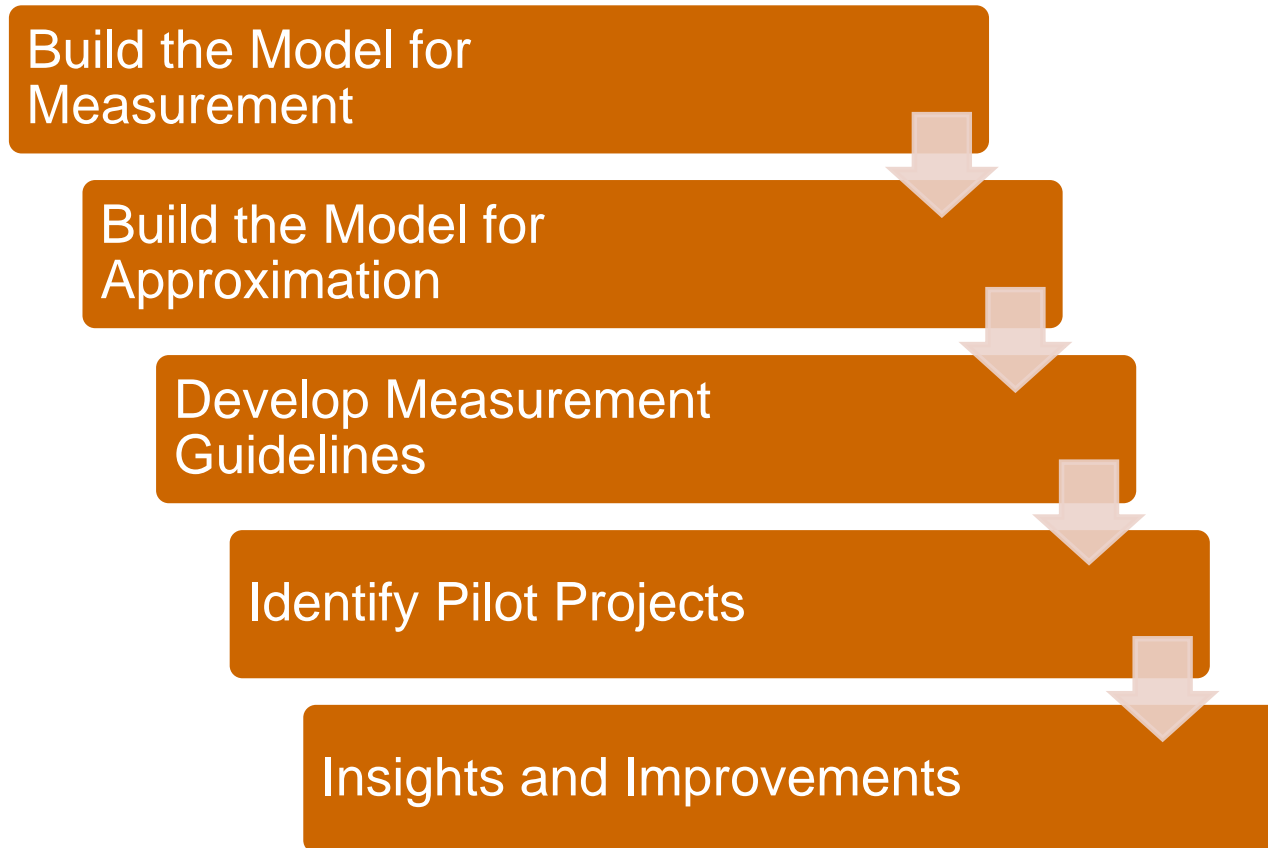
- Classroom and Online Trainings
- Methodology well Understood



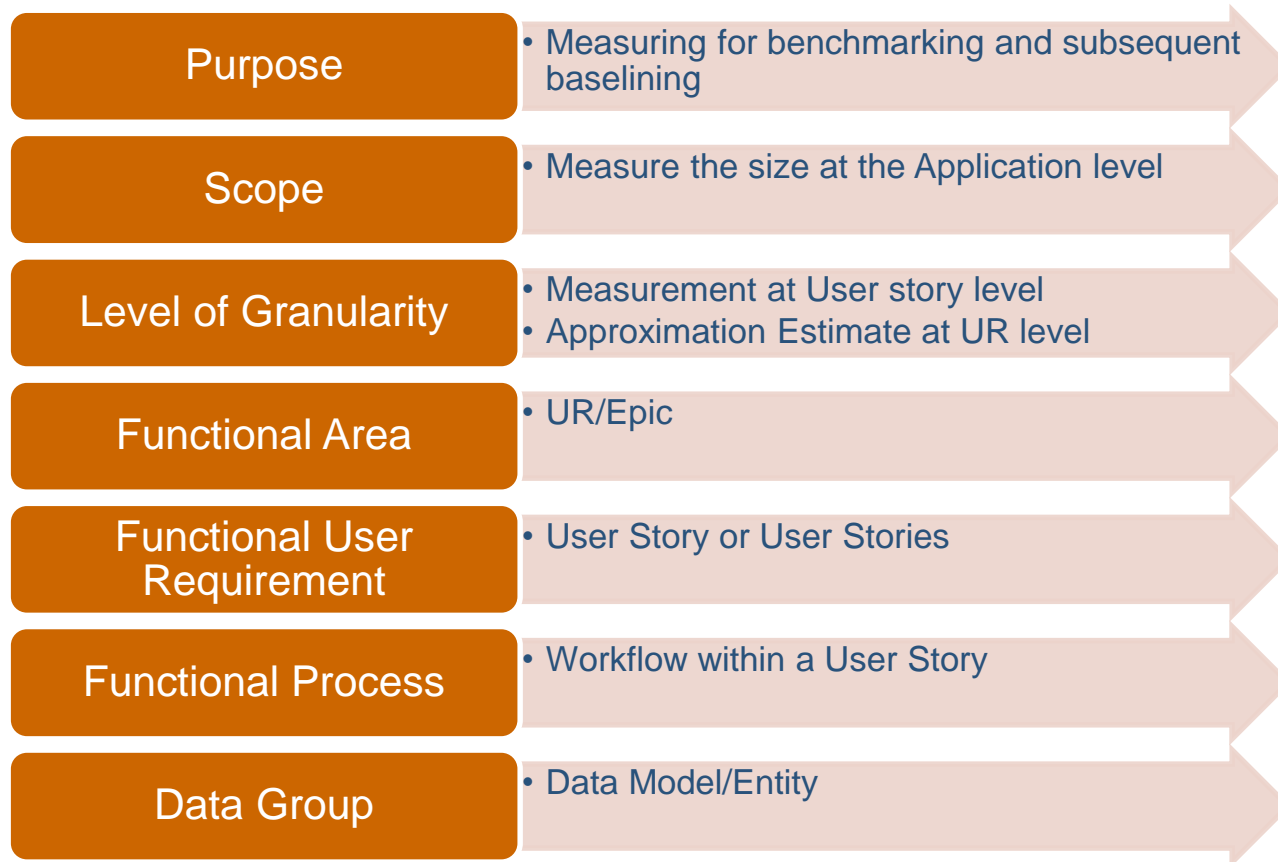
- **Software Context Model** - Characterize a piece of software measured
- **Generic Software Model** - How FUR of the software to be measured are modeled, so that can be measured



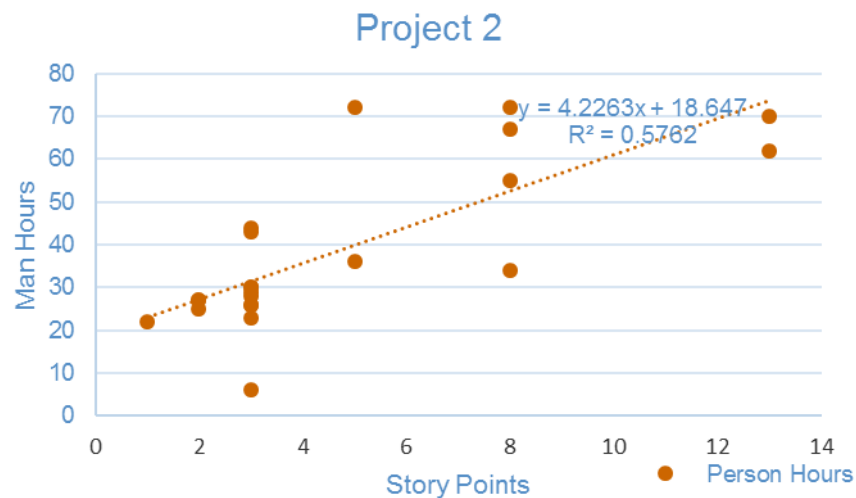
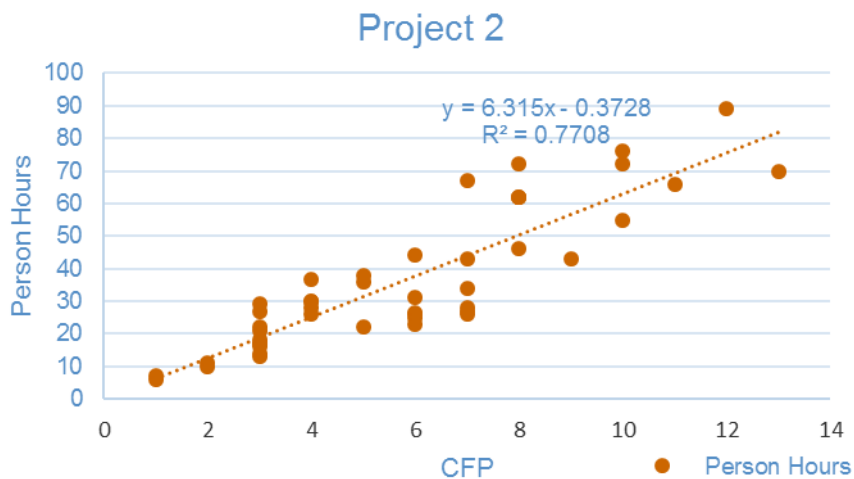
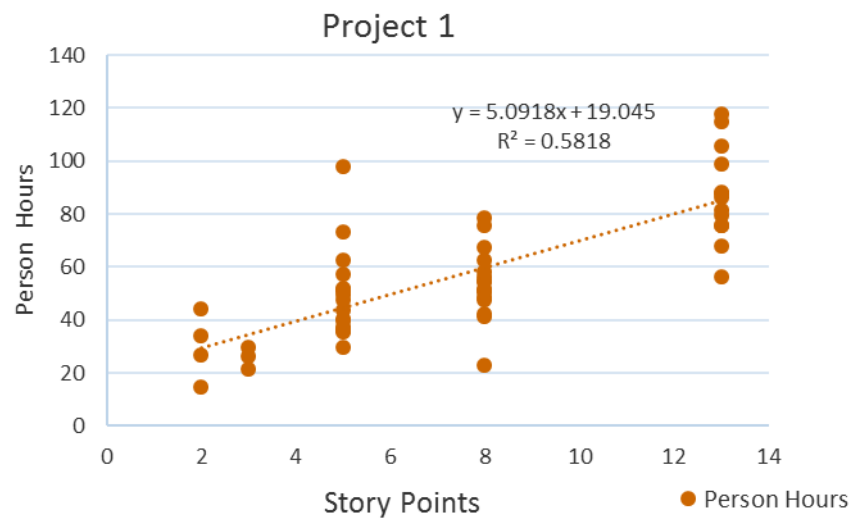
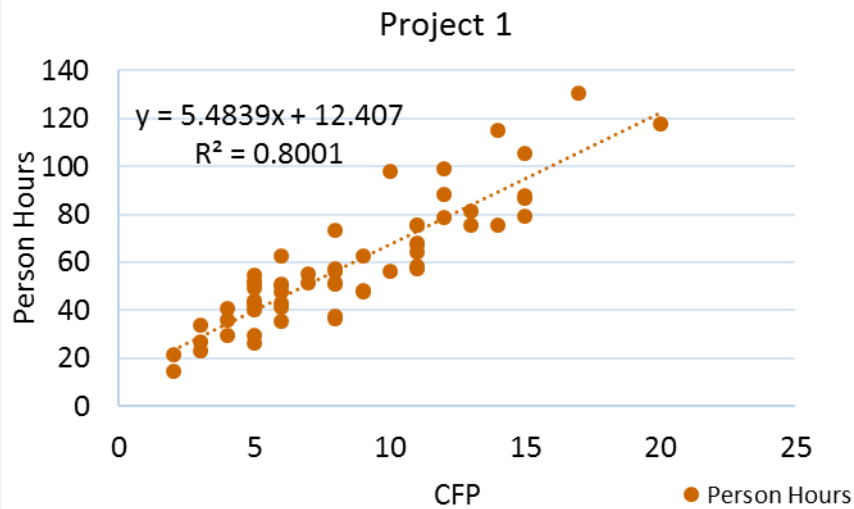
- **E-** Entry Movement of a data group
- **X-** Exit Movement of a data group
- **R-** Read a data group from Persistent store
- **W-** Write a data group to Persistent store



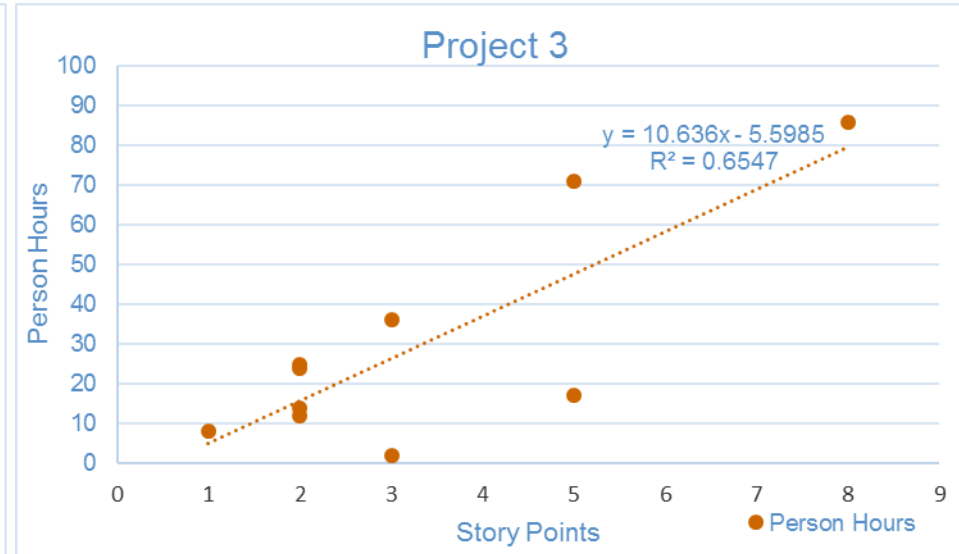
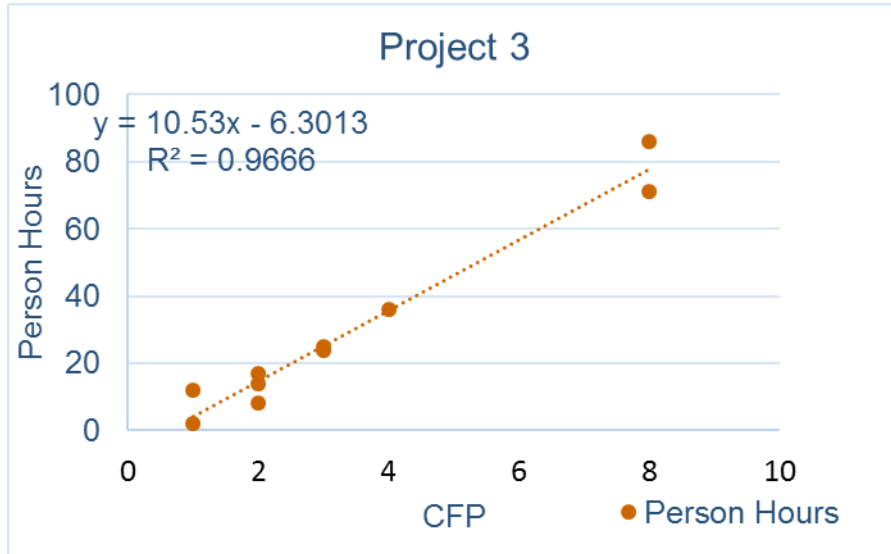
Goal : Minimal disruption to current development practice and minimal involvement from Project teams



Study Pilot (CFP in Person hours to SP in Person Hours)



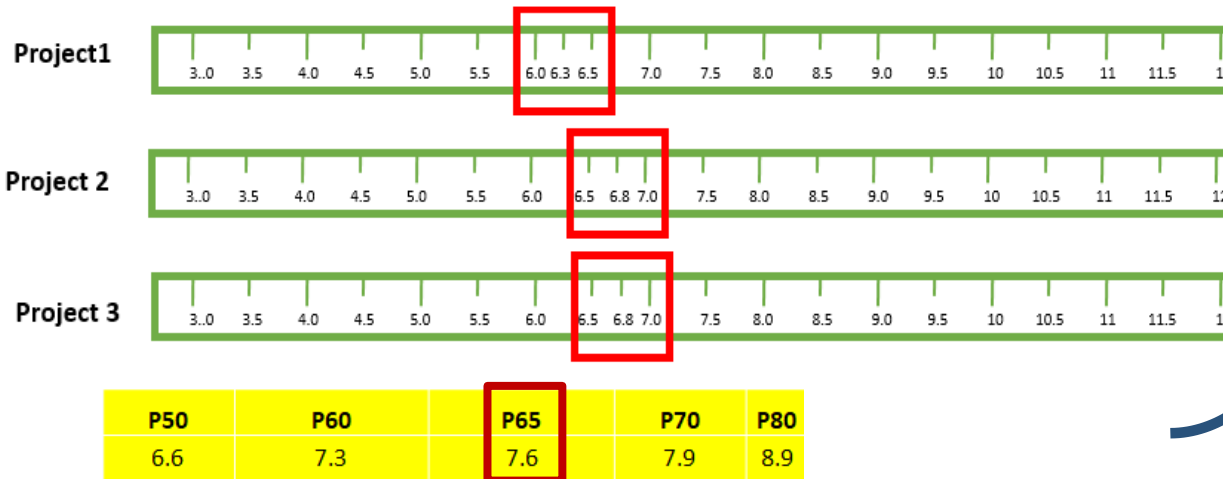
Study Pilot (CFP in Person hours to SP in Person Hours)



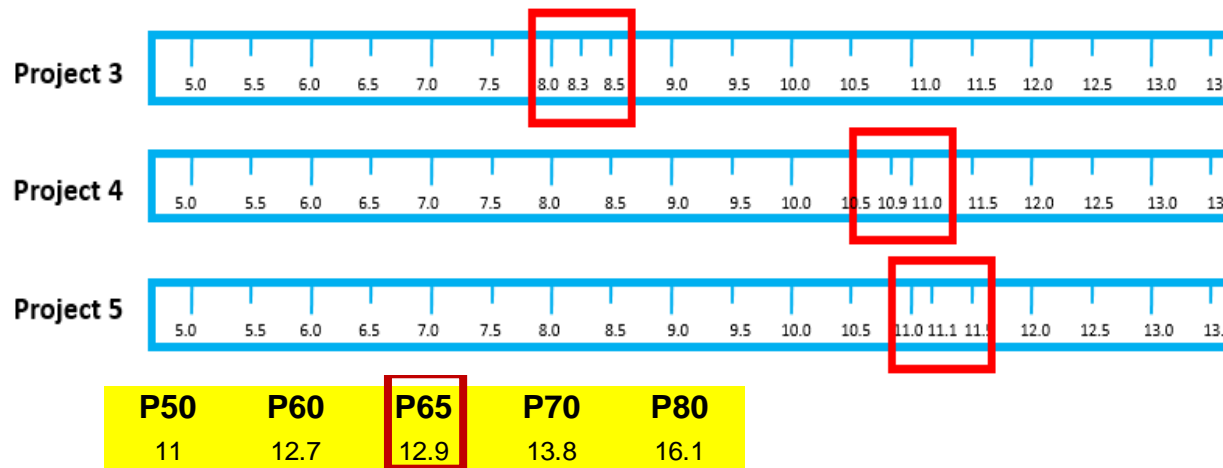
CFP provided better clustering of measured Functional process

Arrived Baselines & Proposed KPIs

Delivery Rate (Hours/CFP) - Development Projects



Delivery Rate (Hours/CFP) - Enhancement Projects



Usability

Productivity Baselines would help in project performance

Two broad project types were observed:

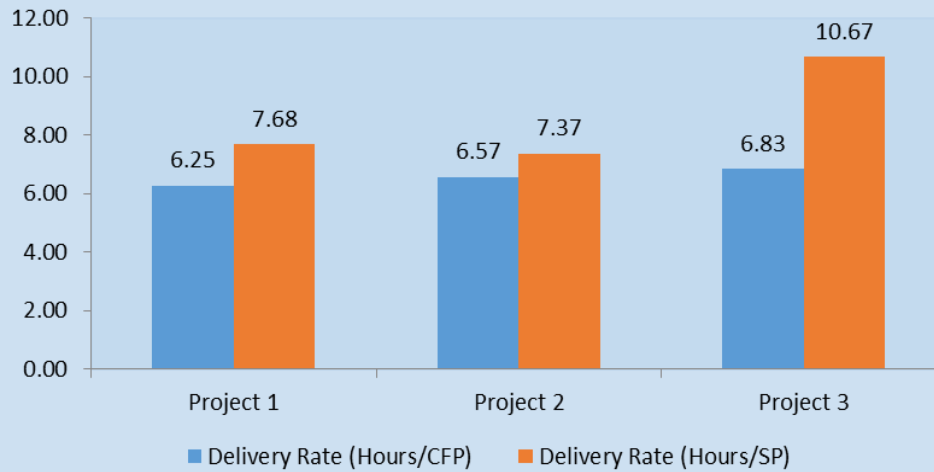
Development – More newly created functionality with few enhancements

Enhancement - More enhancements with few newly created functionalities

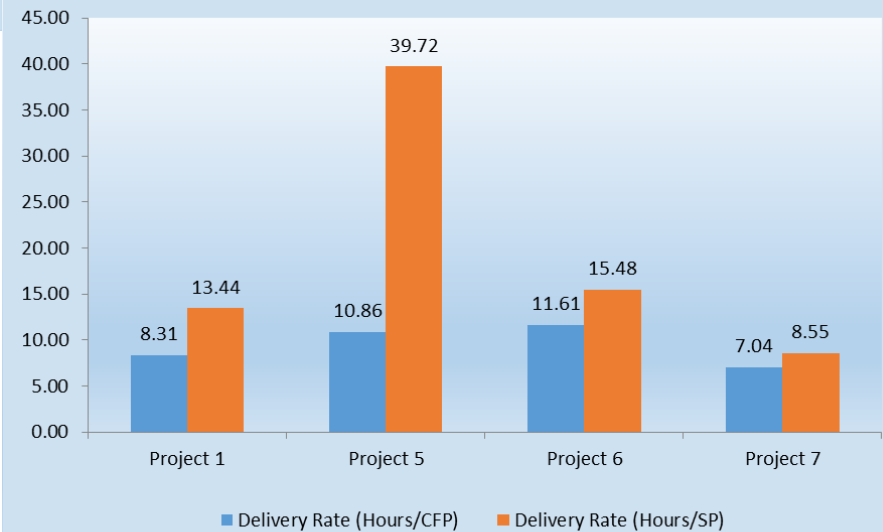
Proposed Release level KPIs

1. Defect Density (Defects/CFP)
2. Defect Leakage [(Defects in UAT+Production)/ CFP]
3. CFP per FUR or FA

Development Model



Enhancement Model



Define Standard Components

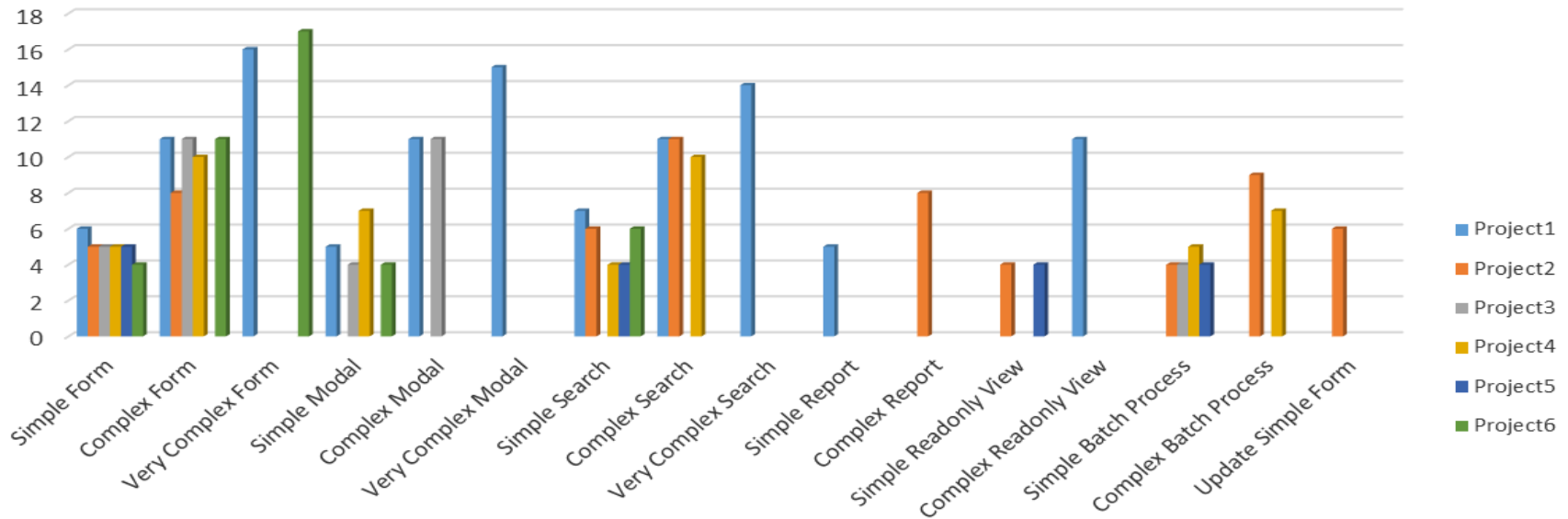
Map Functional Process to Standard Components

Calibration for Wall of Reference

- Correlation across Projects
- Input for Approximate size estimation

Application of Standard Components

Standard Component Type To Cosmic FP



- Standard Component type well understood by teams
- Standard component type are comparable
- Supports Governance

Early & Quick Estimation Model With Example eurofins

Wall of Reference COSMIC FP	8	4	8	6	8	17	6	12	8	16	4	7		
User Requirements/Functional Process	Readonly View	Simple Report	Complex Report	Simple Search	Simple Form	Complex Form	Update Simple Form	Update Complex Form	Simple Modal	Complex Modal	Simple Batch Process	Complex Batch Process	Cosmic FP Units	Effort to Develop
SMS Reporting			1			3	3			2		3	130	910
Advanced Customer Ordering Agreements	2			2	2		2		3		1	3	105	735
Manual Smart Registration	1			1			1				3		32	224
External Comments on Invoice		1		1			1						16	112
M2M Reporting							1					2	20	140
Integrate with CRM													0	0
Dashboard & Reports		2											8	56
Planning Dashboard	1			1				1				1	33	231
													0	0
Total Standard Component Units	4	3	1	5	2	3	8	1	3	2	4	9		
Cosmic FP Units	32	12	8	30	16	51	48	12	24	32	16	63	344	2408

Measurement Maturity Plan



The proposed maturity is planned to be achieved for the selected projects.

In Level 1, Measurement team plans to increase the involvement of project team. The involvement from project needs to gradually increase and as we move to Level 2, projects teams will be able to measure at start of sprint.

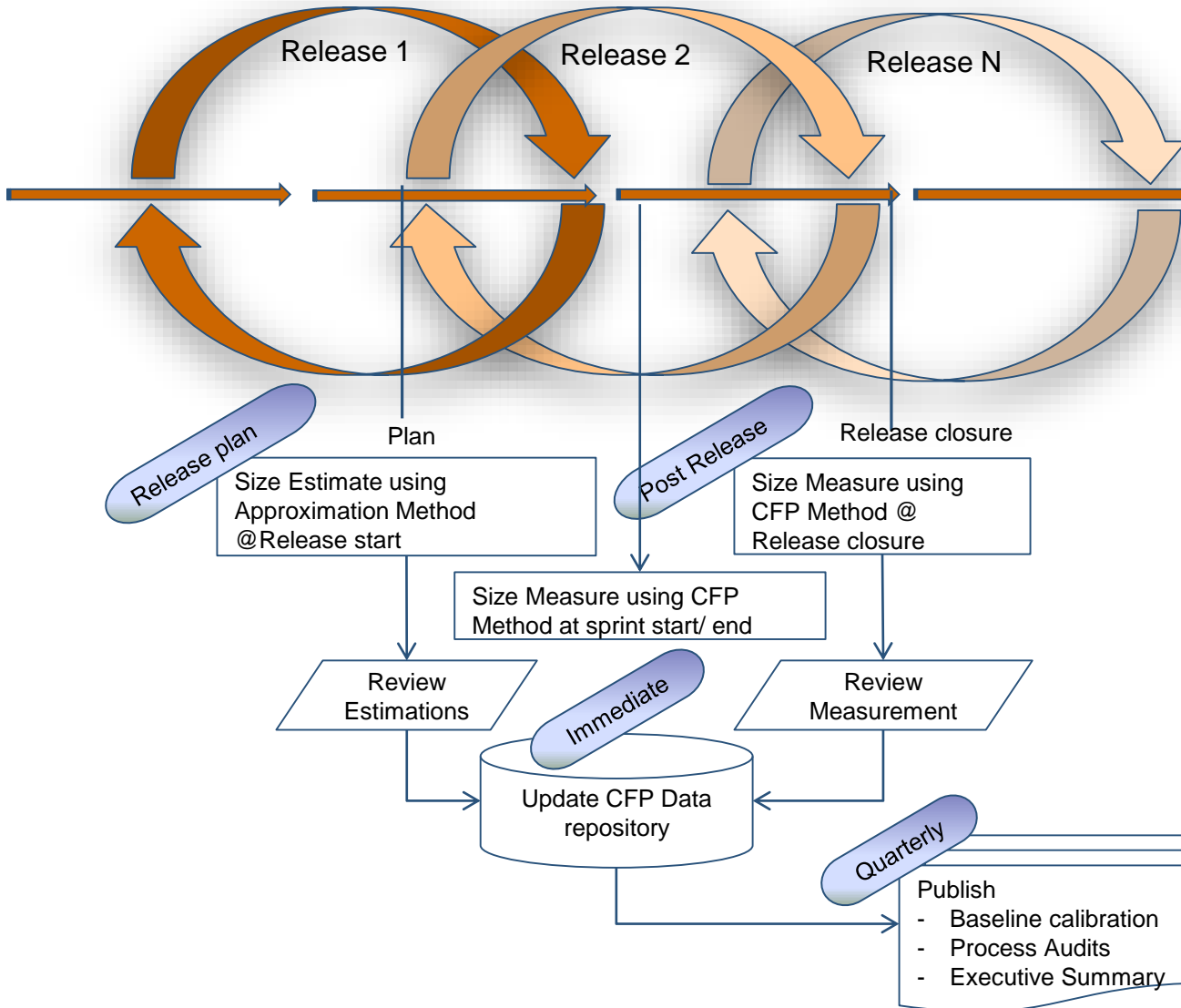
Activities (Team involvement)	Level 3		Level 2		Level 1	
	PRJ	CFP	PRJ	CFP	PRJ	CFP
Estimation @ planning - Approximation Model (UR/ PBI Level)	R	C	R	C	R	C
Measurement @ sprint planning - CFP Methodology (PBI Level)	R	C	R	C	C	R
Measurement @ Release Closure - CFP Method	R	C	C	R	C	R
Peer Review	C	R	C	R	C	R
Caliberation of baselines(++Data collection/verification)		R		R		R
Other support activities						
Trainings	I	R	I	R	I	R
Refinement of documents, templates, checklists		R		R		R
Audits	I	R	I	R	I	R
Executive Summary Meetings+Publishing Reports	I	R	I	R	I	R

Maturity	Project Team	Measurement Team
Level 3	Does size estimation at start of Release using E&Q Method and CFP sizing at start of sprint. Also measures CFP post-sprint.	Guides/ reviews measurements and calibrates baselines
Level 2	Does size estimation at start of Release using E&Q Method and CFP sizing at start of sprint.	Guides/ reviews estimations, measures FUR post release and calibrates baselines
Level 1	Does size estimation at start of Release using E&Q Method.	Does CFP size measurement post release. Some POC with projects on CFP Estimation and calibrates baselines.

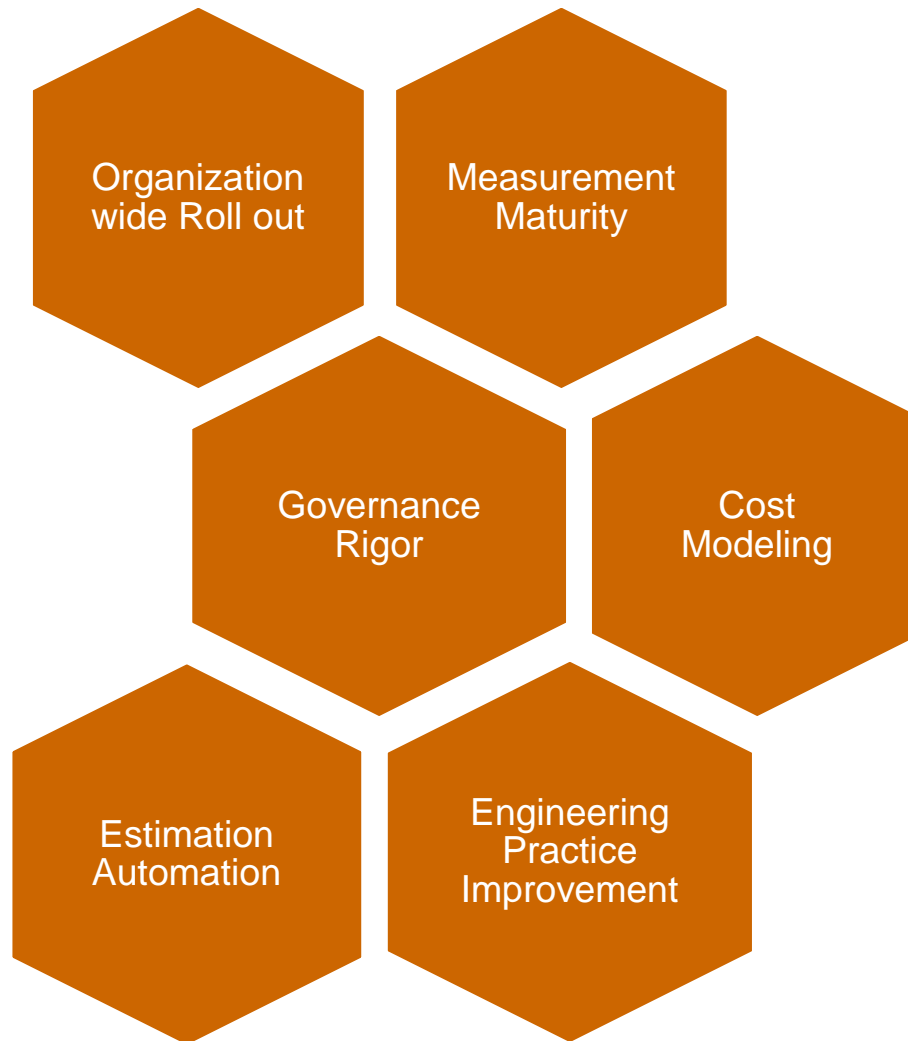
Effort To Measure 1 Functional UR – 0.5 Hours

- R:: Team completely responsible for activities
- C:: Team consulted during activities
- I :: Team is involved during activities

Measurement & Governance Model



- Approximation method applied at start of release (UR availability)
- CFP Method applied at milestone level (PBI availability)



Journey of thousand miles begins with one step.....

*Thank
you*

