

# Software Estimation

COSMIC SIG

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# FSM - SITA's culture.



- 5 Business Lines - Estimation process is mandatory.
- 1.2 + million FP's (Software Age – 15 – 45 years).
- 10000+ SCRUMS historical database over 8 years.
- 11 Vendors (40% of our workforce)
- SITA practices various Industry standard FP methodologies
- SITA has produced a **Software Estimation Tool** which takes 5 - 40 + parameters as input & produces Effort distribution, Cost distribution, Resource distribution, CoSQ and various KPIs.
- Software Estimation Tool **automates (1<sup>st</sup> Phase)** estimation through **data driven** using **our** historical data to produce outputs that enables leadership/board level decisions.



# What is available

- At least 10 different FSM methods ++
- Published ISO standards
- A large training industry
- Experts/FP analysts available worldwide
- Multi company multi vertical use
- Published datasets worldwide

# SITA – Sizing and Analytics - Use



- Supplier Selections\*
- Pricing\*
- Costing\*
- Contract Negotiations\*
- RFP's/Bids\*
- Insourcing\*
- Legal/IP Protect\*
- Patents\*
- Cost of Software Quality\*
- Risk Quotient\*

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# SITA SDLC – Cost Influencers



- Rework
- Retrofit
- Dependency Map
- Refactor
- COSQ
- Supplier Quotients
- Integration
- IP Leakage
- Shelf Upkeep
- +++++

58 Parameters

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# SITA's SDLC



- SITA follows 3 types of development models
  - Scrum Based Development
  - Scrum Based Large Development
  - Factory Agileat a high level the process is as below.
- SITA Estimation team looks at SDLC from the cost perspectives as we are tasked to derive cost using SITAs historical data and we are made responsible for the budget approvals.
- SITA has a complex SDLC as we need to include everybody involved in the project E2E from the business to deployment in our costings.

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# SITA's SDLC



- Business Owner/Product Owner/PDEF- produces the high level business requirements
- CFT Architect – Confirms the architecture
- Estimation team – Estimates the projects using FP, uses organisation metrics to translate FPs into costs and get the funding approved by the business.
- Core Team – Translates high level requirements to low detailed designs documents, produces Service specs etc..
- SCRUM – DCUT
- SQACE- takes care of AIP testing
- Project Mgt – Manages the project
- Overheads
- Deployment- deploys the code base

After finalising the SDLC effort loading is done to arrive at actual efforts.

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# VISIBILITY



- SITA's Estimation team has created a Visibility matrix which is made part of the Estimation Process
- Estimation team decides which FP method to use based on the "Visibility Matrix"
- Visibility Matrix tells us about the amount of documented clarity & depth in the requirements/whole solution
- Visibility is an assumption about how much the estimated size of the project is likely to vary during development. Along with known risks, visibility is the main determinant of how much contingency should be allocated for the project.



# RE USE



- Re use is the ability to use existing assets across solution lines in any form during the project lifecycle from requirements to UAT complete
- Re use needs to be carefully factored into only the portions of SDLC where the Re use is identified. This should not applied across the SDLC
- Productivity should be carefully adjusted for the SDLC portions of Re use to arrive at appropriate effort distribution
- Costs need to be worked out considering Re use

# Rework



- Rework is a very important concept in software development and this is often times ignored for various reasons.
- Rework is defined as a measure of the impact of change on a piece of existing functionality that has passed a testing milestone, where a testing milestone can refer to FAT, SQACE or UAT phases of the SDLC.
- Rework shows a direct on the budgets and the sponsors are not always in a position to accommodate budget for Rework
- SITA always factors Rework as part of the initial estimates
- Rework should not be calculated as a % of the actual FPs.

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# SITA – Software Estimations



Thank you.

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# AGENDA



- FP
- SDLC
- Visibility
- Reuse
- Rework

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