

Pitfalls to avoid in Agile Functional Size Estimating

Carol Dekkers | President Quality Plus Technologies
Tampa ,US

Roopali Anand Thapar | Function Point SME
New Delhi, India

IBM Services

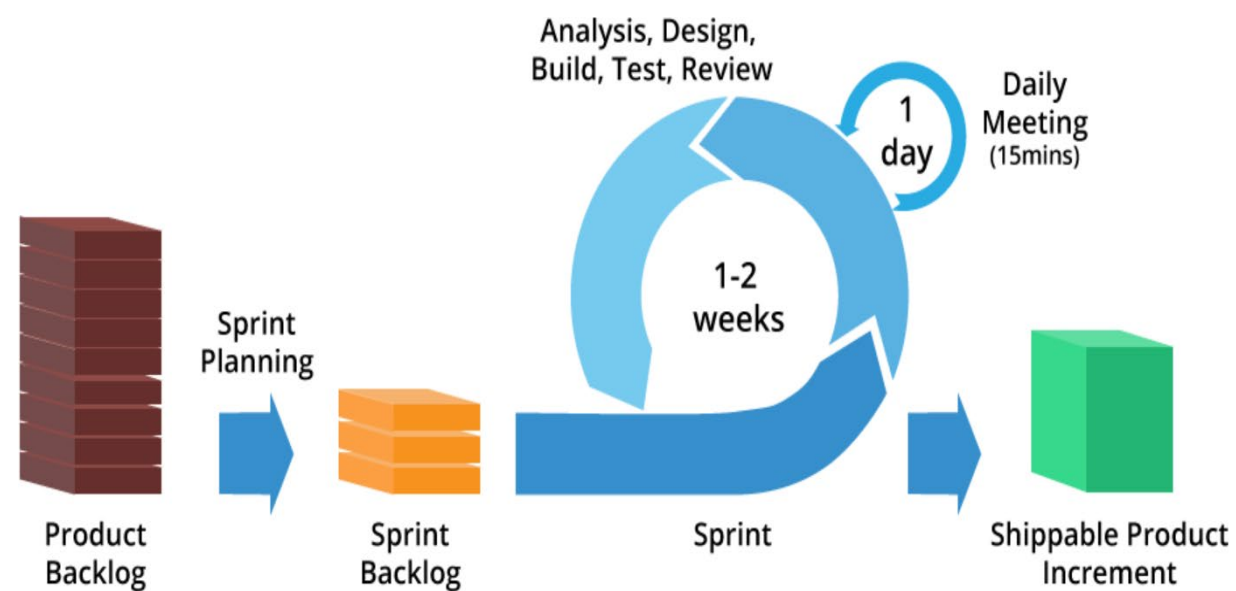


Contents

1. Using FP on Agile Projects
2. Checkpoints for FP usage in Agile delivery framework
3. Additional Recommendations

Using FP on Agile projects

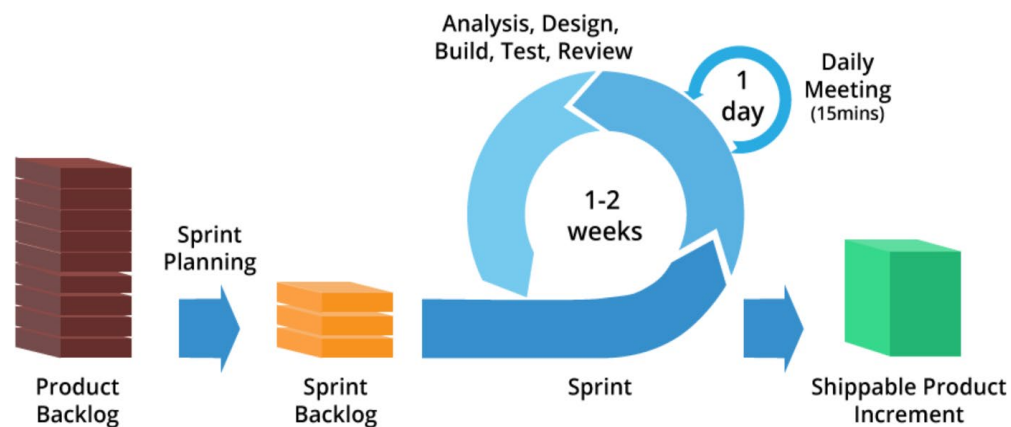
A view of an Agile Project delivery:



- ✓ Project = software product requirements (functional and non-functional and technical)
- ✓ Requirements are taken off of the product “backlog” and worked on (delivered) via one or more “sprints”
- ✓ Sprints are of a pre-set duration (typically 2 weeks) with a number of person hours
- ✓ Effort Estimates are done for each requirement – this is how the right number of requirements is allocated to a sprint
- ✓ Effort Estimation is TYPICALLY done in one of several ways including Tshirt Sizing, FP, Story Points, Use Case Points, etc.

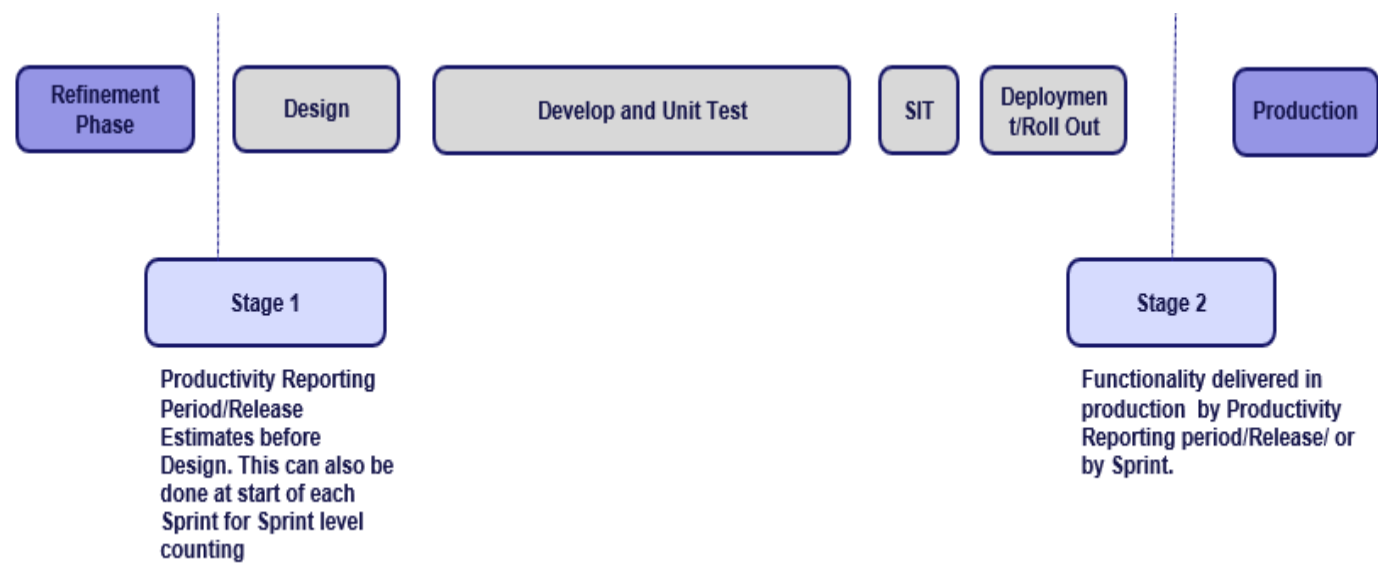
Using FP on Agile projects

Estimation of Agile Project delivery:



- ✓ Problems exist with using “non-standard” sizing methods such as Story Points and T-shirt sizing
- ✓ FPA → gives a STANDARD, consistent measure of software FUNCTIONALITY across projects, platforms, sprints etc.
- ✓ FPA = consistent across teams – independent of skills, etc. – BUT can be used ONLY for those requirements that are FUNCTIONAL
- ✓ For Functional Requirements, FP → show case incremental delivered business value to the end users.

When can FP be used with Agile delivery?



- ✓ Stage 1 and Stage 2 are best places to use FPA
- ✓ FP counting process = consistent across development methodologies... + additional considerations for Agile
- ✓ FPA may be performed at the completion of agile project or at any point during its development .It may be performed for a sprint (functionality developed) or for an entire project (functionality delivered).

Delivery Process to FP Mapping

Ensure that the below points have been considered while using FP in Agile..

Applicability:

- FP is applicable irrespective of the delivery methodology
- Find the co-relation of the metric to ensure it is right measure on given platform

Approach:

- FP is applicable irrespective of the delivery methodology
- Find the co-relation of the metric to ensure it is right measure on given platform

Inclusions and Exclusions :

- FP does not assesses Non Functional Requirements
- It doesn't include consulting work or bug fix

What and When to Count?

- Difference exists in “developed software”, “In progress software” and “delivered software
- Is it by Release vs by Sprint

Effort Classification:

- Is the effort is classified as per measurement?

The advantage of using FP estimation method is that it enables cross industry comparison of estimates...

Criteria	Function Points	Story Points
Criteria	Function Points	Story Points
Kind of Size Measure	Absolute	Relative (SPECIFIC TO A TEAM)
Useful at the project level for re-estimating or planning	with historical FP data	Inconsistent – can get better when history is collected (after the first several sprints) – remains team specific
ISO / Standards based	ISO 20926	No
Can be used for benchmarking	yes	No (non-standard)
Easy to Calculate	Yes, with training	Yes
Repeatable Estimates	Yes	Yes (within the team only)
Easy to Validate/Audit	Yes	No
Objectivity	Yes	Less (relative)
Technological independence	Yes	No (depends on expert judgment)

Release vs Sprint level FP counts?

Use Release level counting when

- Functional Requirement completion can be mapped to a release only
- For comparisons with other projects or traditional waterfall methodology results
- Estimations for future project

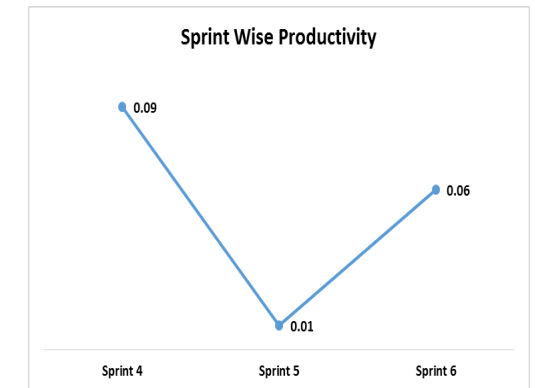
Use Sprint level counting when

- Functional Requirement completion can be mapped at sprint level
- Sprint level planning and estimation
- Account for rework and scope creep within sprints

- ✓ Whether to count at Sprint level or Release level depends upon the goal or purpose of the measurement

Check what goes into the Sprint...

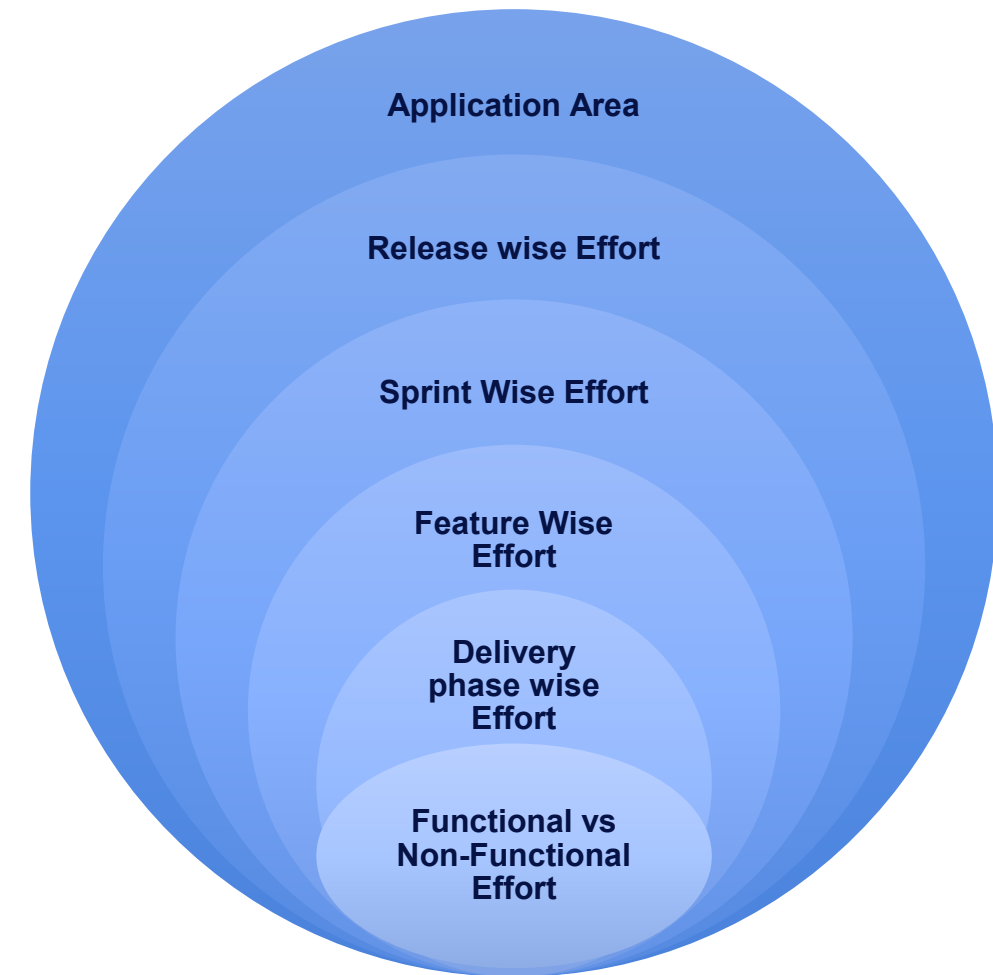
Sprint 4	Sprint 5	Sprint 6
Bug Fix	Req 4 – Analysis	Req 4 - Design
Req 2 – Test/Deploy	Req 3 – Build/Test	Req 3- Deploy
Req 1 – Deploy		
Req 3- Refine/Design		



- ✓ If there a number of sprints in a release and each deploying partial functionality, then it is not good to assess productivity at Sprint level as-is. Else use progressive sprint productivity calculations to avoid sprint wise variations
- ✓ For Delivered productivity calculations, ensure you have accounted for requirements which are only delivered and not in-progress
- ✓ Remember there is difference in **'delivered productivity'** and **'in progress productivity'**

Detailed effort classification can help to achieve better estimates

- ✓ Map your delivery process to the required level of effort granularity for each application in scope of the measurement.
- ✓ Ensure that the effort is logged to enough detail so that functional effort can be accurately used for any productivity calculations



Other Recommendations

01. Be cautious of Sprint to Sprint extreme variations

Progressive Sprint productivity should be used for reporting instead of individual sprints and be reported along with the release level productivity

2. Improve quality of information available to FPA involved in counting

- Feature documentation should be made available with clear description of functionalities being delivered across systems
- FP baselines can be maintained using tools to reduce counting effort

3. Check for FP co-relation with effort

FP co-relation should be assessed with effort to ensure that the measurement metric is making viable sense in package based environments. Start with Proof of Concept checks

04. Ensure FP Count Review and validation process exists

FP Validation process needs to be included to ensure that all the functions are covered and assessed accurately.

Any Questions ?

Thank you !

Contact Information

Roopali Anand Thapar

IBM India Pvt Ltd

Email: roopali.Thapar@in.ibm.com

Carol Dekkers,

CFPS (Fellow), PMP, CSM President, Quality Plus Technologies,
Inc. Office +1 (813) 8161329

dekkers@qualityplustech.com

