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Simple Function Point and Story Point integration in Agile Contract Management

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the Knowledge Broker

DPO Srl
1967

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our customers.



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2019

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36% Private

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The small size,
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Application
Lifecycle
Management



System
Dynamics





Agile fashion

- The ICT world has always been characterized by fashions and influencers.
- Today, the Agile style is driving the market, in line with the cultural trends of the liquid society

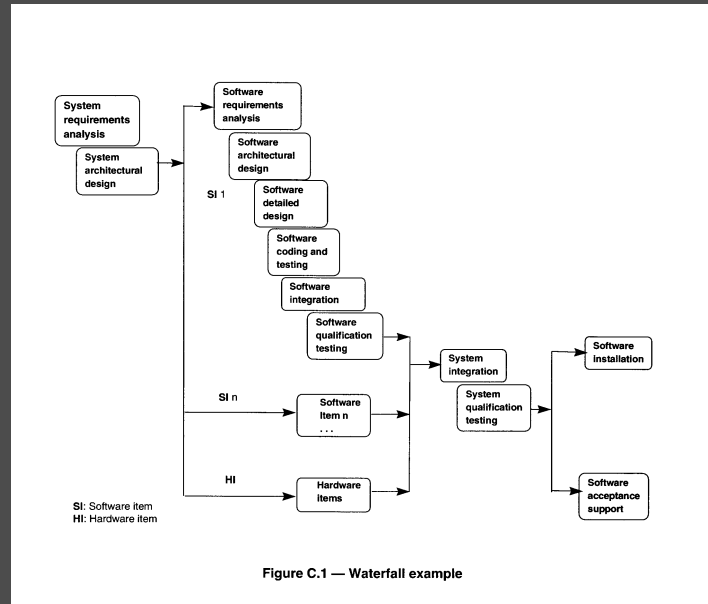
Were dinosaurs winners or losers over mammals?



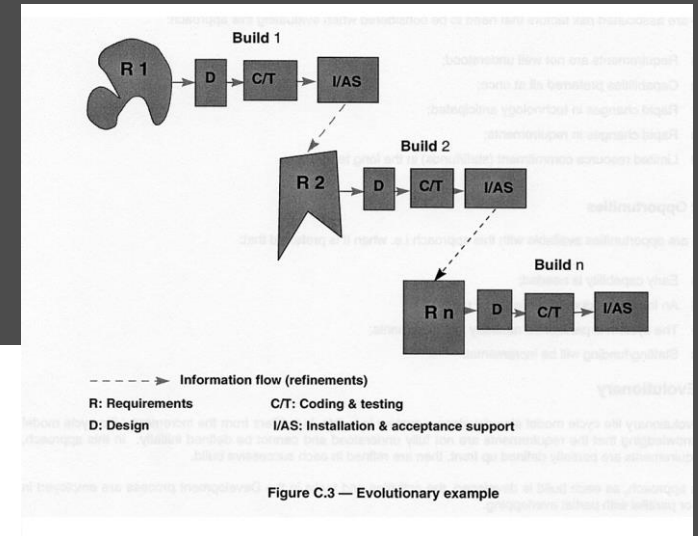
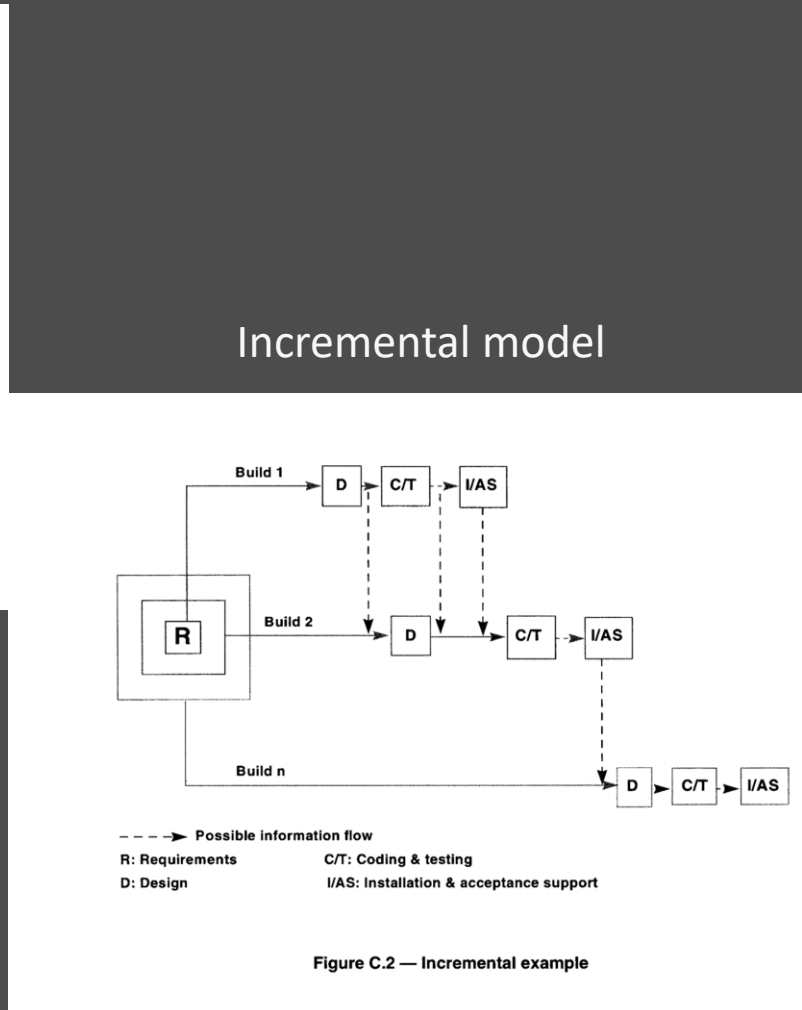
The answer must take into consideration the context in which they lived: in one context the dinosaurs were dramatically successful and in another absolutely losers.

The business world is not homogeneous, dinosaurs need to coexist with mammals and everyone in their ecological niche will thrive and win.

Production Processes Catalogue (ISO)



Waterfall model



Evolutionary model

Project Classification			Contract type				Production Model		
Project Size	Project Complexity	Uncertainty (contents, technology, context)	Body rental	Time & Material	Delivered product size	Turnkey	Waterfall	Incremental	Evolutionary
L	L	L	I	I	P	A	P	I	P
H	L	L	I	I	P	A	A	P	I
L	H	L	P	A	P	P	P	P	A
H	H	L	P	P	A	P	P	P	I
L	L	H	P	P	A	I	I	P	A
H	L	H	P	P	A	I	I	A	P
L	H	H	P	A	P	I	I	P	A
H	H	H	P	P	A	I	I	A	P

P

Possible

A

Advisable

I

Inadvisable

Once the Agile approach has been (adequately) chosen, how do we manage it?



- Documentation tends to be overlooked
- The broad involvement of the company in the adoption is difficult to apply
- The end user is often not available
- Some transversal roles that provide services (quality assurance, architecture ...) cannot be continuously involved avoiding waste and demotivation
- You know when you leave but you don't know when and where you will arrive
- Priorities are driven by ongoing activities
- Loss of forecasting capacity on the use of resources in the medium to long term
- You cannot understand your own productivity
- You can't compare with the outside or with yourself over time

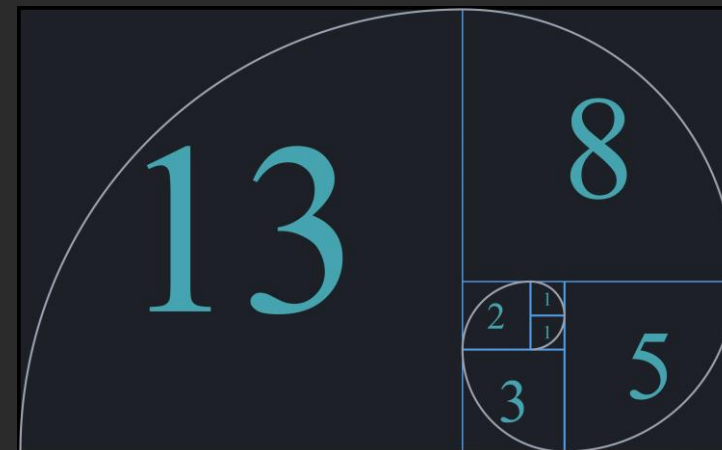


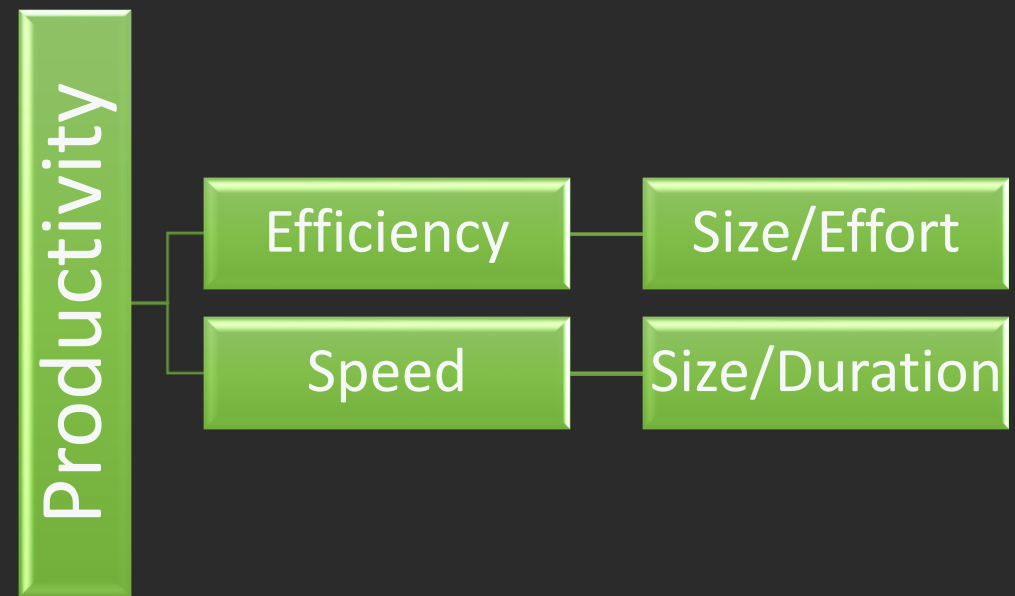
- **Capacity** – Available resource time
- **Velocity** - Tasks implemented in iterations - average value
- **Capacity utilization** - Ratio between capacity and worklog - time actually used
- **Estimation variance** - Accuracy in the continuity of estimates (difference between "original estimation" and "real implementation")
- **Lead Time** - end-to-end crossing time (entry into the exit from the process)
- **Cycle Time** - time spent adding value
- **Technical debt** - implicit cost of a rework caused by choosing a simple solution now instead of a better one which would take longer.
- **Functional mismatching** - difference between what the designers imagined and what the market expected



The estimates and measures normally used in agile processes (eg story points) are essentially the valorization of the work effort deemed necessary to implement the user stories or epics. They are not measures of size but of effort.

Productivity cannot be represented as the relationship between the story point and the actual effort committed because this indicates at most a comparison between the forecasted value against the actual value of the same variable: effort.

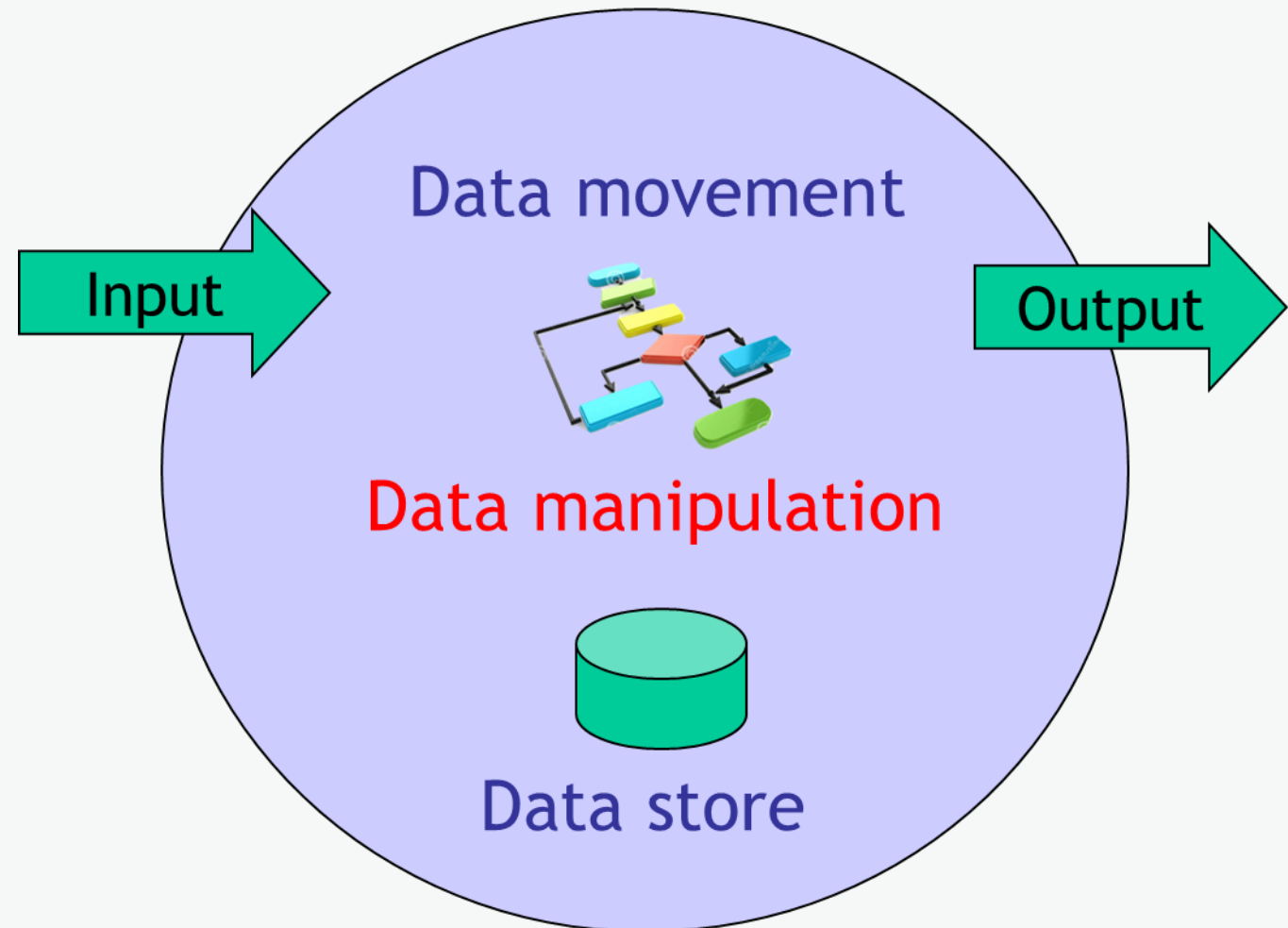




- The functional measurement (size) of a software product (Function Points) can give added value to the management of software projects in agile mode.

- Methods and tools must allow to detect useful measures in a convenient and consistent way with the light and adaptable setting of the production process.

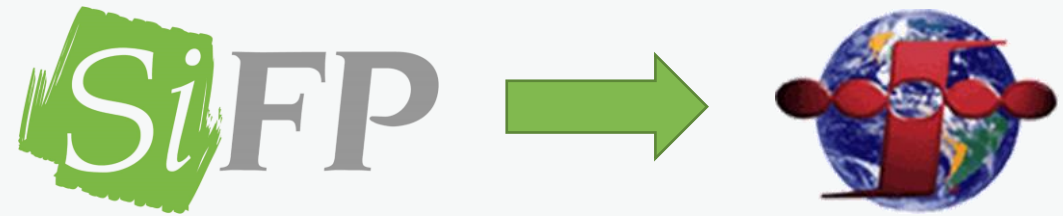
Functional Size Model



A functional product measure, in a version that is **acceptable** to the agile teams, should be included in the project dashboard.

Simple Function Points, a method defined in 2010 and acquired in 2019 by IFPUG, has this “appeal”.

Without the ISBSG repository, SiFP wouldn't be invented !



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GENERAL / OFFICIAL NOTICES

IFPUG Acquires the Simple Function Points Method


BY ADMIN · PUBLISHED SEPTEMBER 12, 2019 · UPDATED DECEMBER 6, 2019

IFPUG is pleased to announce the acquisition of the Simple Function Points method (SiFP), a technique that will be integrated into the IFPUG product portfolio over the next few months.

The IFPUG community has long felt the need for a simplified FP counting method. As a matter of fact, a 2015 paper ("uTip") from the Functional Sizing Standards Committee (FSSC) provided an introduction on how to apply FPA in the early stages of software projects, as well as how to perform FPA very quickly using estimating techniques. This existing knowledge will be combined with the SiFP technique to make FP counting easier and still reliable even in the early stages of a software project.

In 2017 Mr. Roberto Meli, the creator of SiFP and President of the SiFP Association, based in Italy, approached the IFPUG Board of Directors and proposed that IFPUG acquire the SiFP method, the rationale being that IFPUG would be able to give SiFP higher visibility on a worldwide basis.

After extensive negotiation an agreement was reached and the deal was closed in Princeton Junction, NJ, USA, in August 30th, 2019.



QUICK LINKS

- IFPUG Member Services Area
- How to Navigate the Member Services Area
- Public Certification Search
- IFPUG Code of Ethics Form

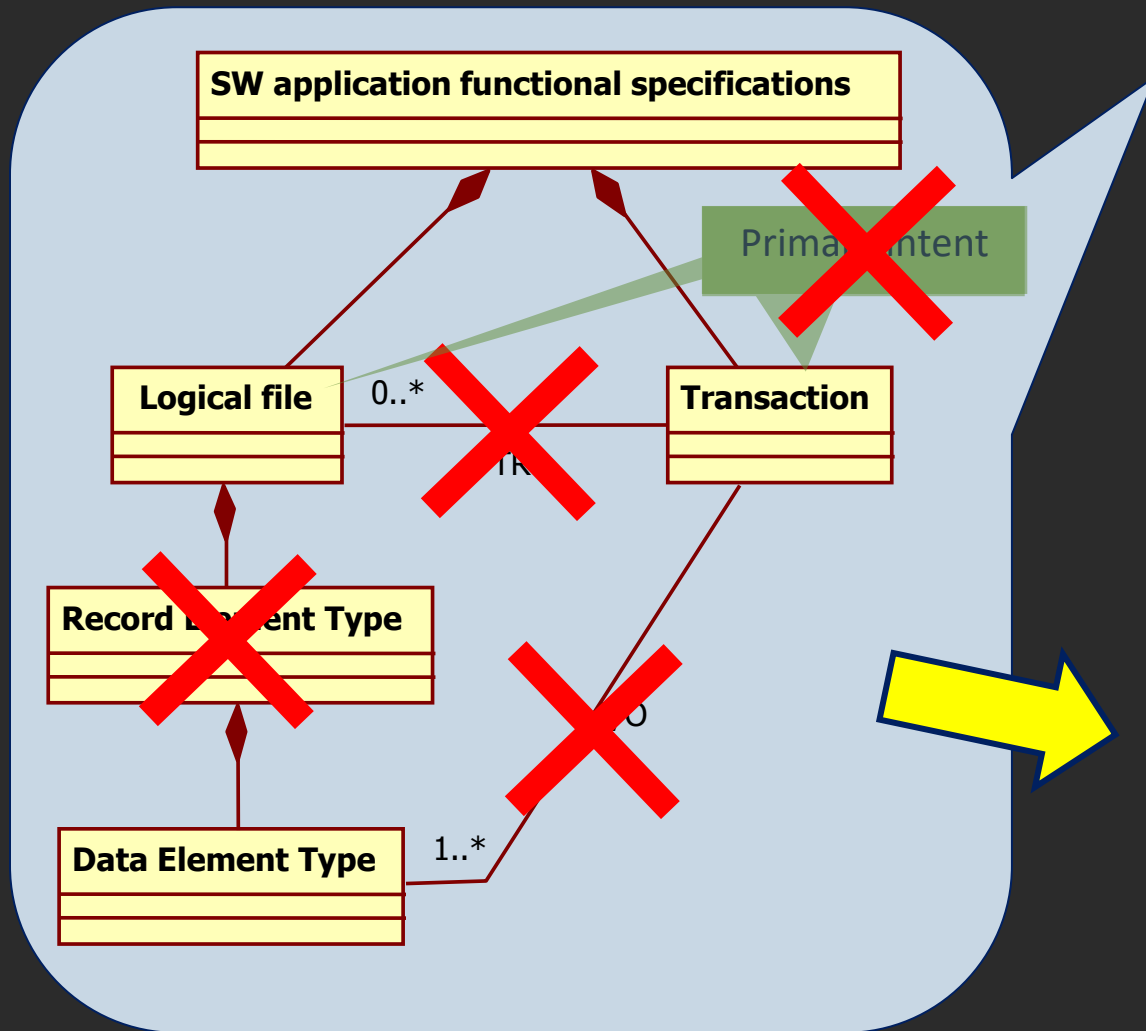
SEARCH

Search ... [Search](#)

RECENT NEWS

- Available a New Edition of MetricViews: "New Trends in Measuring Software Size to Answer Questions About Productivity and Software Value"

SiFP Method



FPA



SFP – (SiFP)

SW application functional specifications

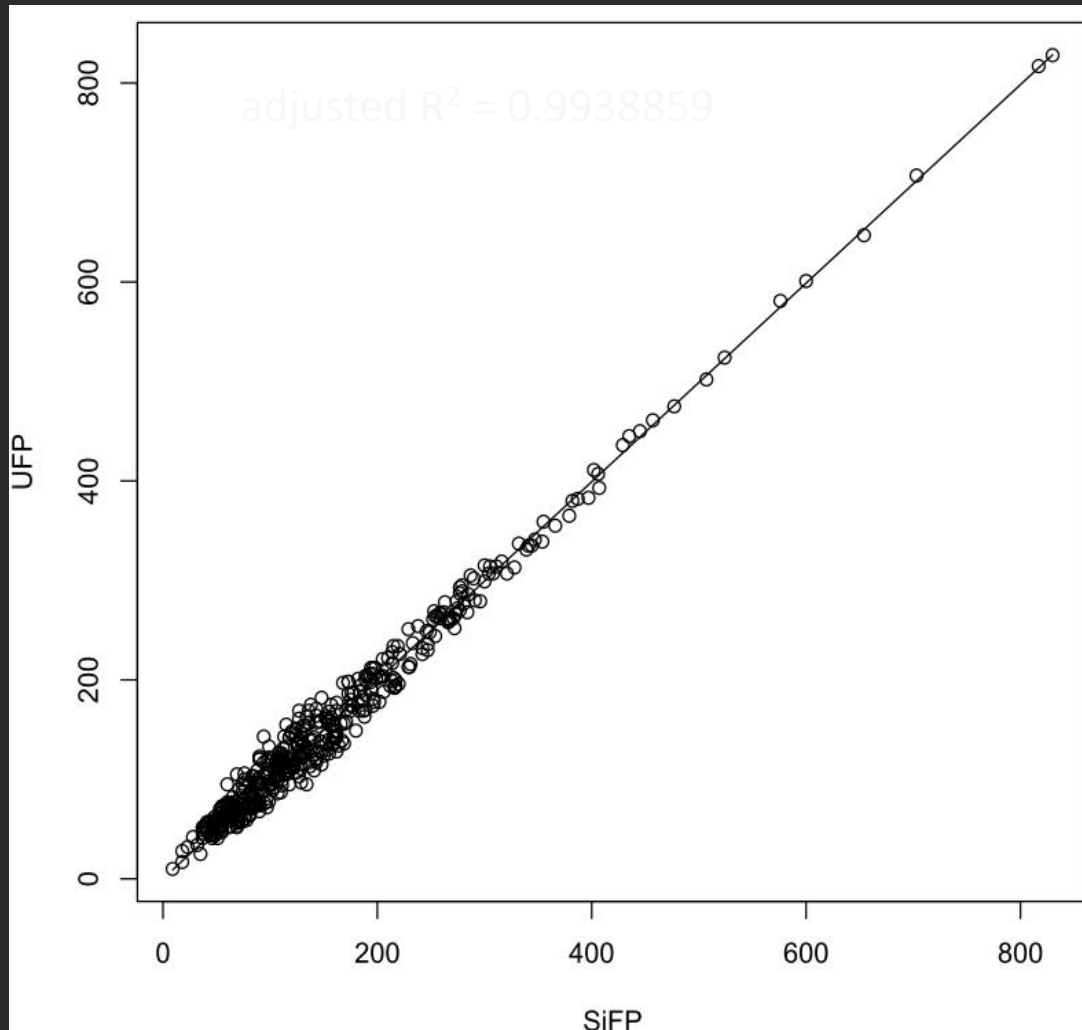
LF (UGDG)

EP (UGEP)



IFPUG FPA may be applied in an Agile context but IFPUG SFP is better because:

- It is quicker
- It is simpler
- It is easy to be learnt
- It is directly applicable by the team
- It is precise enough
- It may be used for effort estimation at a general level with the same performance as FPA



$$\text{SiFP} = 0.9979531 \text{ UFP}$$

The accuracy of the resulting model is characterized by:

$$\text{MMRE} = 11.6\%$$

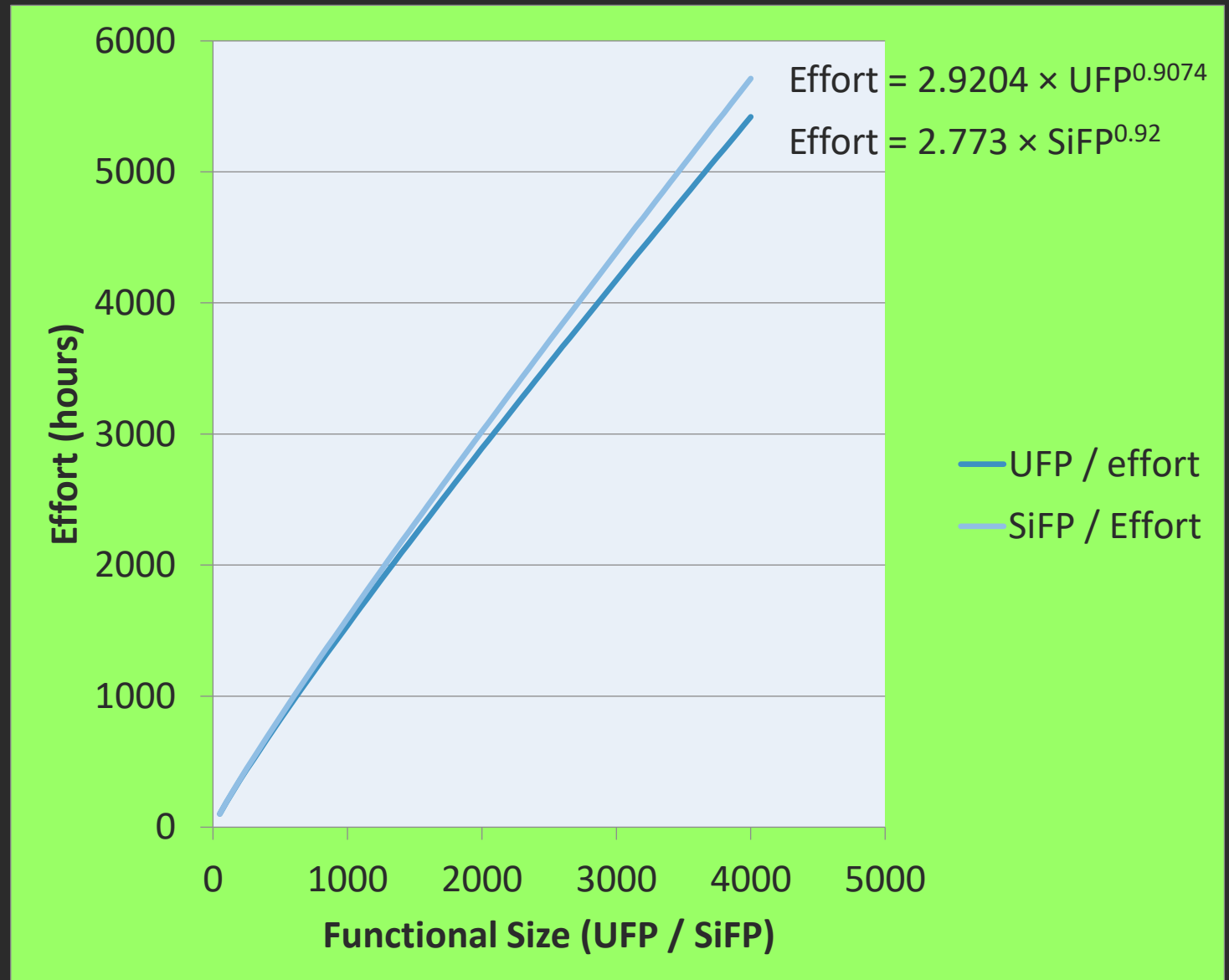
$$\text{MdMRE} = 9.9\%$$

$$\text{Pred}(25) = 92.95\%$$

$$\text{Error range} = [-48\% .. 41\%]$$

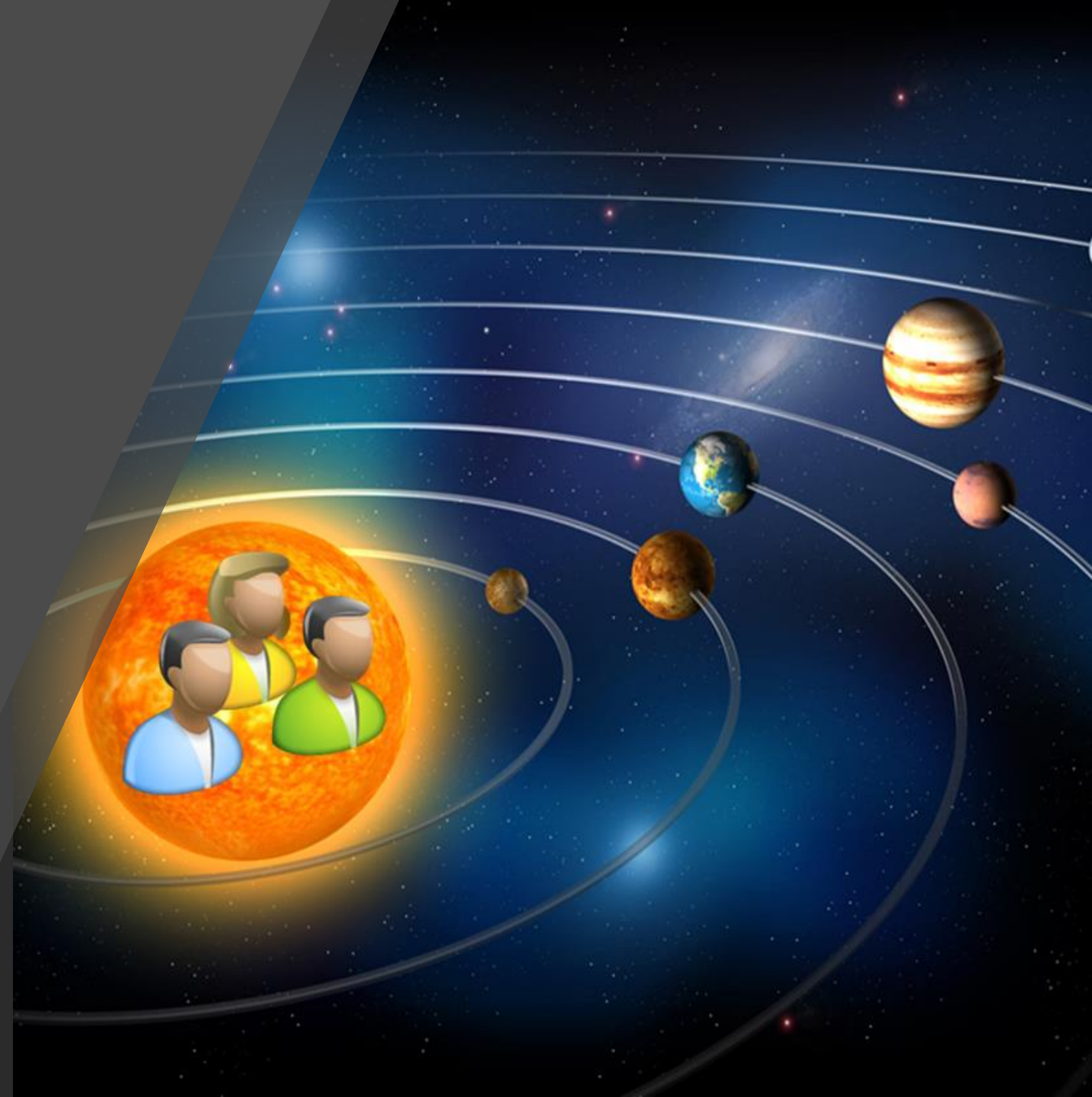
They are equivalent
for effort estimation.

- Studies conducted by Lavazza on a sample of about 700 projects, extracted by ISBSG data bases, counted with the IFPUG and SiFP methods have shown the following finding:
- The accuracy of a model of correlation between actual effort and the software functional size does not decrease substantially when considering only the number of BFC in each of the two classes (data or transaction).



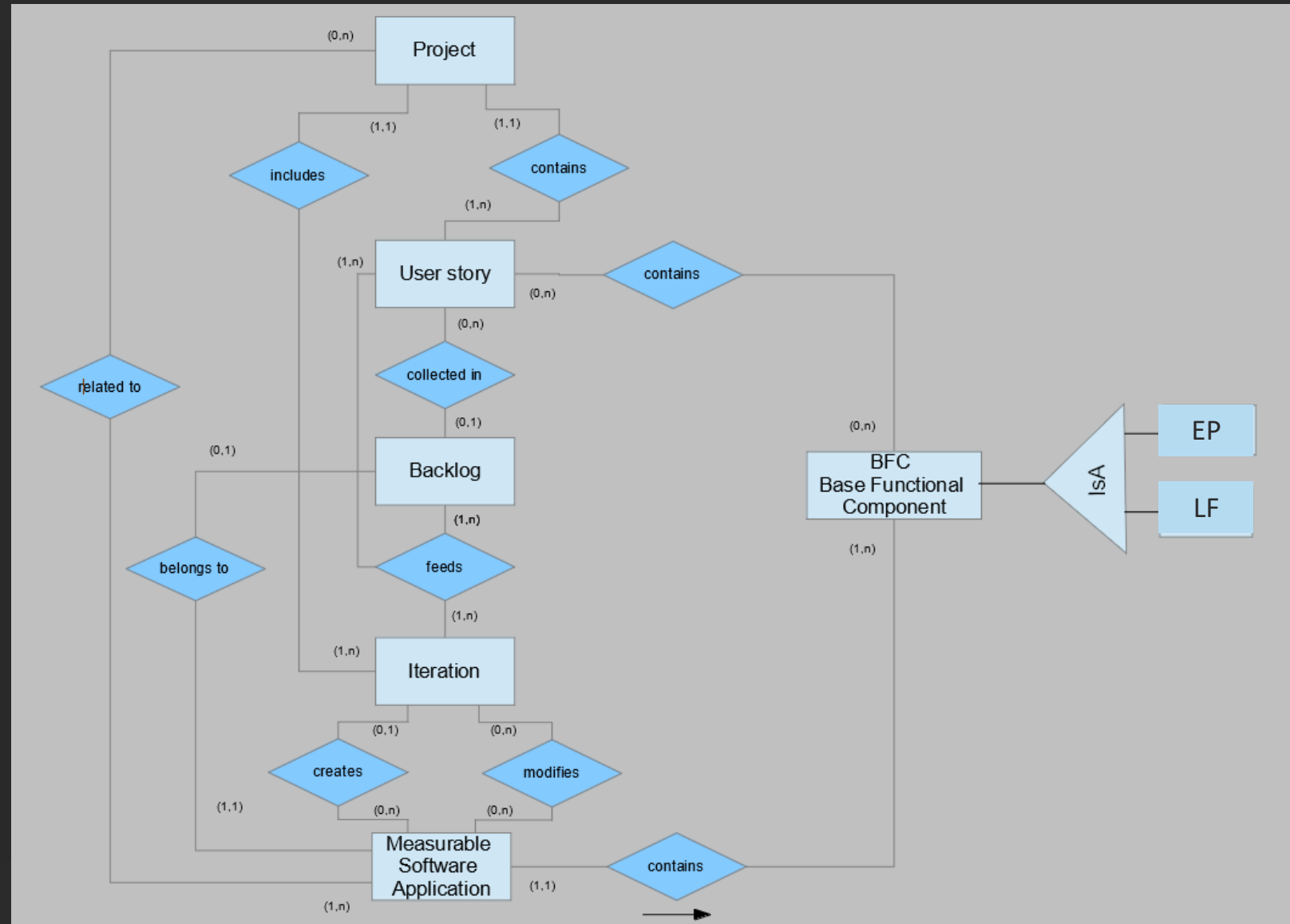
The center of the agile process then becomes the (functional and non-functional) requirement and its implementation workflow.

With the valorization and tracking of functionalities, it is possible to move from an approach with fixed durations / efforts and variable contents (sprints) to an approach oriented towards "consumable" solutions, reducing waste due to the repetition of uncoordinated test activities, managing priorities and dependencies between releases explicitly and favoring continuous integration & delivery as well as productivity tracking.



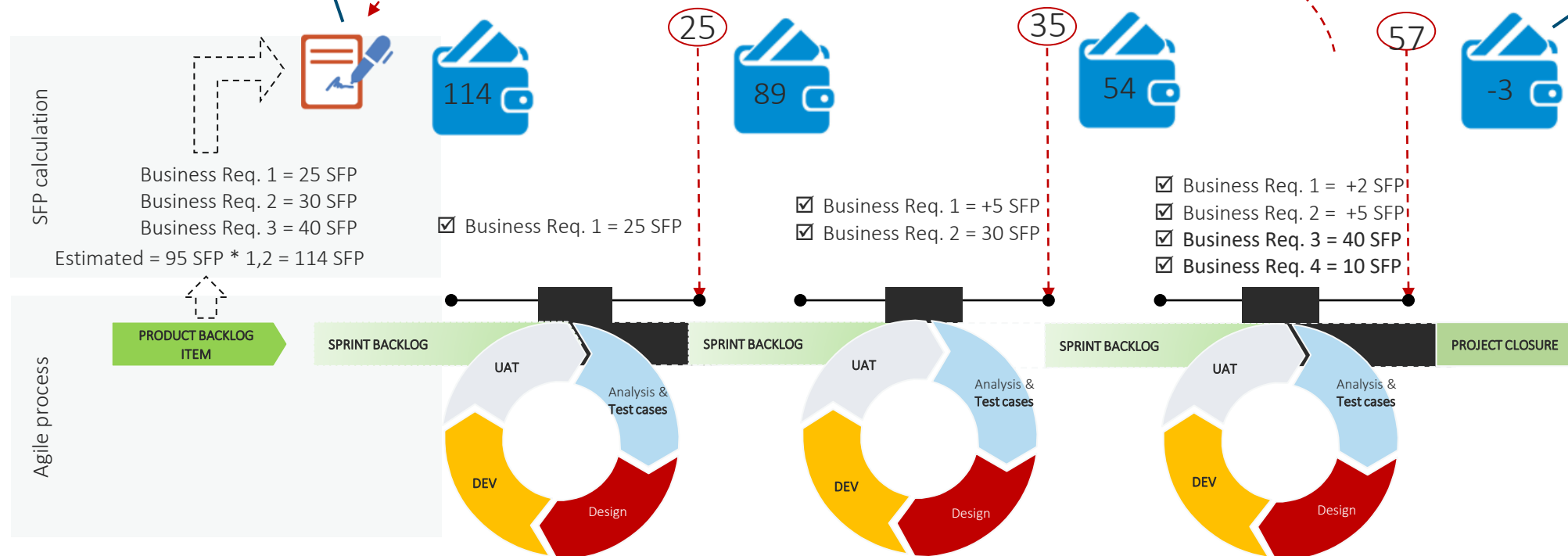
Measuring SFP in an Agile SW production process

Conceptually, an Agile project can be assimilated to an overall production intervention that includes within it various Functional Evolutionary Maintenance interventions that take place on the same application: in each Sprint a certain functionality can be realized for the first time which, in subsequent Sprints, it could also be modified / completed or deleted.

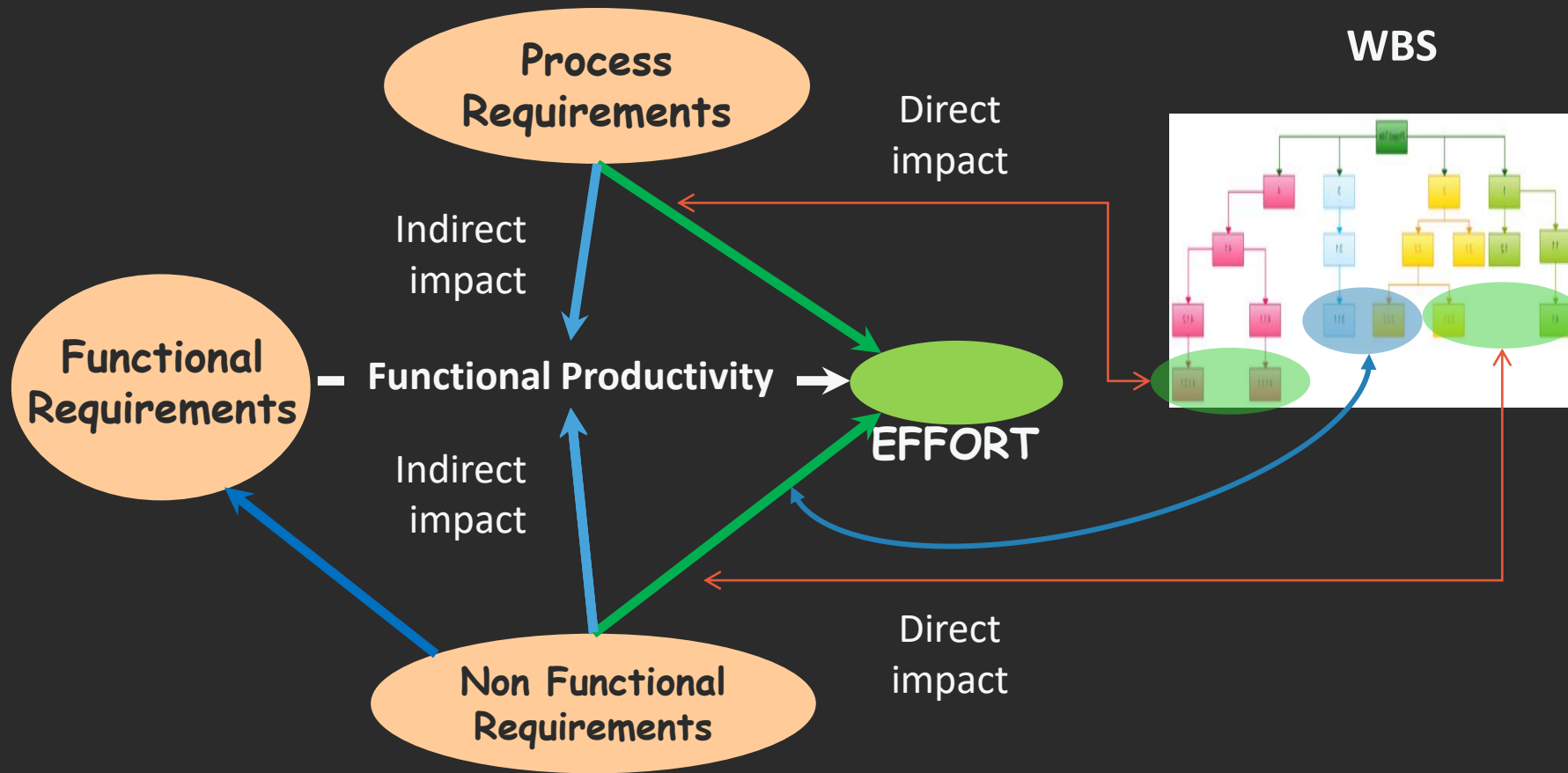


- The contract shows the quantity of Function Point identified by the estimate based on the project requirements collected and adjusted with a conventional "evolution" coefficient

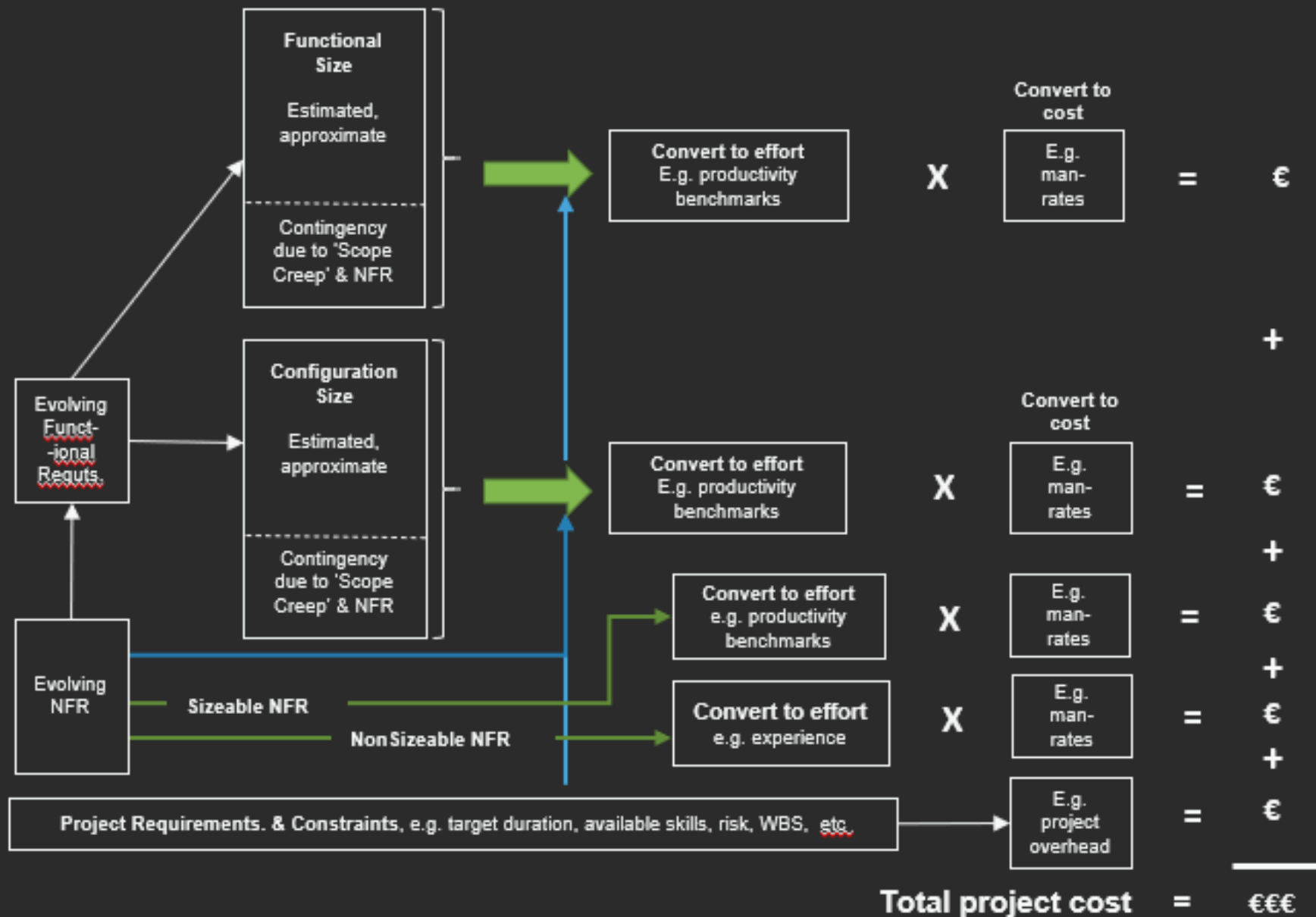
- The final balance is a credit or a debt to be remedied with respect to the forecast



AEI: Actual "Evolution" Indicator = «worked» SFP / released SFP at the end of intervention



Overall Effort Model (VAMOS©)



This is a
«superset» of
the ABC model.
It incorporate it
as a particular
case of use.

Please, do not
use any cost /
effort model at
a BFC / Story /
Use Case and
even Sprint
level !!



Simple Function Point:

- Applicable only to FURs
 - Project effort estimation
 - Productivity tracking (cost, effort, time)
 - Benchmarking
 - Contract Management
 - Priority management
-

Story Point:

- Applicable to FUR and NFR
- Sprint effort estimation
- Accuracy of sprint estimation
- Priority management

Advantages

Estimate



The estimation of the effort (work) necessary to release or modify a software application can be conducted in a direct and intuitive way only when the granularity of the requirements and activities is very high. The quality of the estimate is highly dependent on the skills and experience of the staff who make it. Cost models based on product measurements allow, on the other hand, to anticipate, standardize and share the estimate among stakeholders.

Contract



When the relations between the parties are formal and cross the customer-supplier market barrier, it is essential to give preliminary and final evidence of the work and its concrete results. Productivity becomes a relevant indicator in the management of supplies and allows you to verify the promises established at the offer level. The size in SiFP becomes the measure of the "quantity" of software product exchanged between the parties.

Compare



Benchmarking is a governance activity that allows you to get to know each other and relate to the reference market. Without measures it is simply impossible.

Learn



The recording of the measures and their analysis allows to develop a learning behavior that crosses the various levels of the organizational structure.



- ✓ The most common measures in an Agile project are process measures.
- ✓ Story Points are a local estimate of effort and not a product measure.
- ✓ The SFPs are, on the other hand, a software product measure which, associated with the SPs and effort records, can allow for the detection and management of productivity.
- ✓ It is possible to use FPs in an Agile context without rejection only if they are "simple" to measure and manage (SFPs are so).
- ✓ With the same final software product released, producing with evolutionary approaches (eg Agile) may involve higher costs due to the greater number of "processed" SFPs and not due to a lower process productivity, which is actually better due to innovative methodologies and tools used. Without SFP this cannot emerge.
- ✓ The higher potential costs (with the same "released") are generally offset by a higher quality of the final deliverable.
- ✓ The use of SFPs in an Agile context can allow you to manage the implementation priorities of the requirements while remaining consistent with the assigned budget, avoiding late surprises.
- ✓ Any costs relating to activities generated by non-functional requirements must be estimated and justified, case by case, directly in person days.

Ex: adaptation / improvement of the code that also occurs on features not provided for in the count of the sprint in progress, the improvement of performances, or the adaptation to new architectural constraints imposed



That's all Folks!