The Fundamentals of Function Points for IT Budgeting

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Abstract:
The fundamentals of Function Points for IT budgeting

Nearly half of all IT projects are challenged, and every fifth of them fail. It is fair to say that it is more a rule than an exception that most IT projects extend 3-4 times the estimated plan. IT development projects cost industries and governments billions of dollars every year. At 7N, we are on a mission of lifting the bar of the IT departments, and we would like to invite you to a webinar that covers one way to ensure your IT project being on time and budget.

Studies show that only 2-4% of large IT departments handle forecasting time and costs for software development projects professionally. Consequently, management focuses more on closing projects – rather than verifying the requirements for what makes a successful project. In this regard, a Function Point Analysis is probably the most widely used and accepted method to provide better cost control of software development projects and in the measure of value delivered.

Why is Function Point relevant for you and your organization?
Most complex IT projects are scoped and handled by professional project managers. However, most project managers are experts in executing a project rather than estimating their time and cost requirements. With this webinar, you will get insights into:

- The advantages of using Function Point Analyses
- Where to start when you want to conduct a Function Point Analysis
- How Function Point Analyses works from Contract to Delivery
- How Governments uses Function Point Analyses by Governments for pricing and decision-making
- How the Private Sector is using Function Point Analyses for delivery selection and competitive pricing

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Host organization: 7N

Christine Green

Independent Senior Analyst and Forecast Advisor

20+ years of experience in the software industry. **Focus on Process Improvement, Complex and Critical software projects**..

Worked on Critical contracts and projects for both government and private sector. Independent Consultant and Advisor since 2017.

M.Sc. in Mathematics and Computer Science
Certified - PMP, CSM, LSS BB, CFPS Fellow

President of IFPUG 2019-2021
CFPS Fellow since September 15th, 2020

Software projects is critical to the business

…but only 35% is considered successful

Over the past decade
at least 19% failed

Removing the ability to fail a software project would bring a ROI of at least 1% of the revenue…

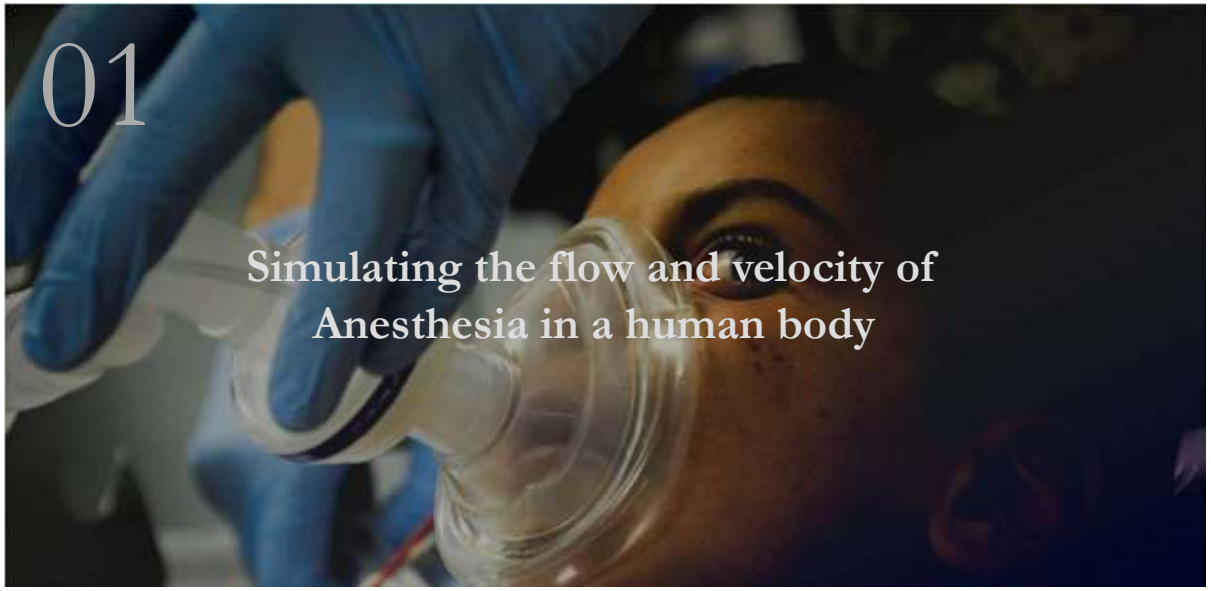
46% of all Software project is challenged

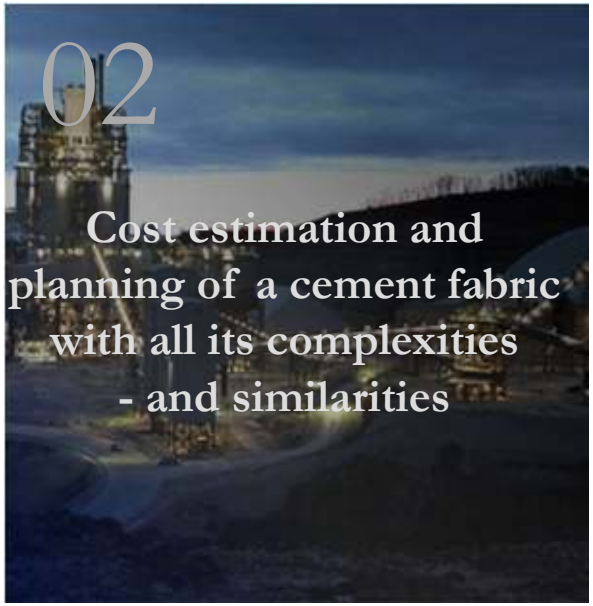
Not meeting budget, time or delivering the value expected to the business

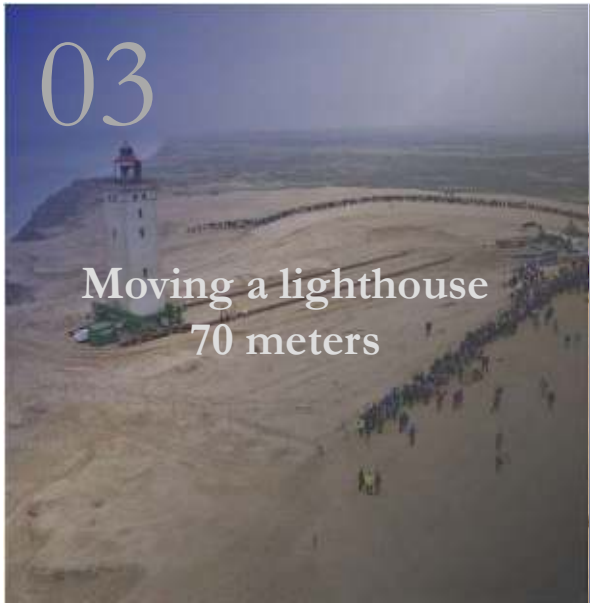
Successful projects requires the use of a combination of Art and Science

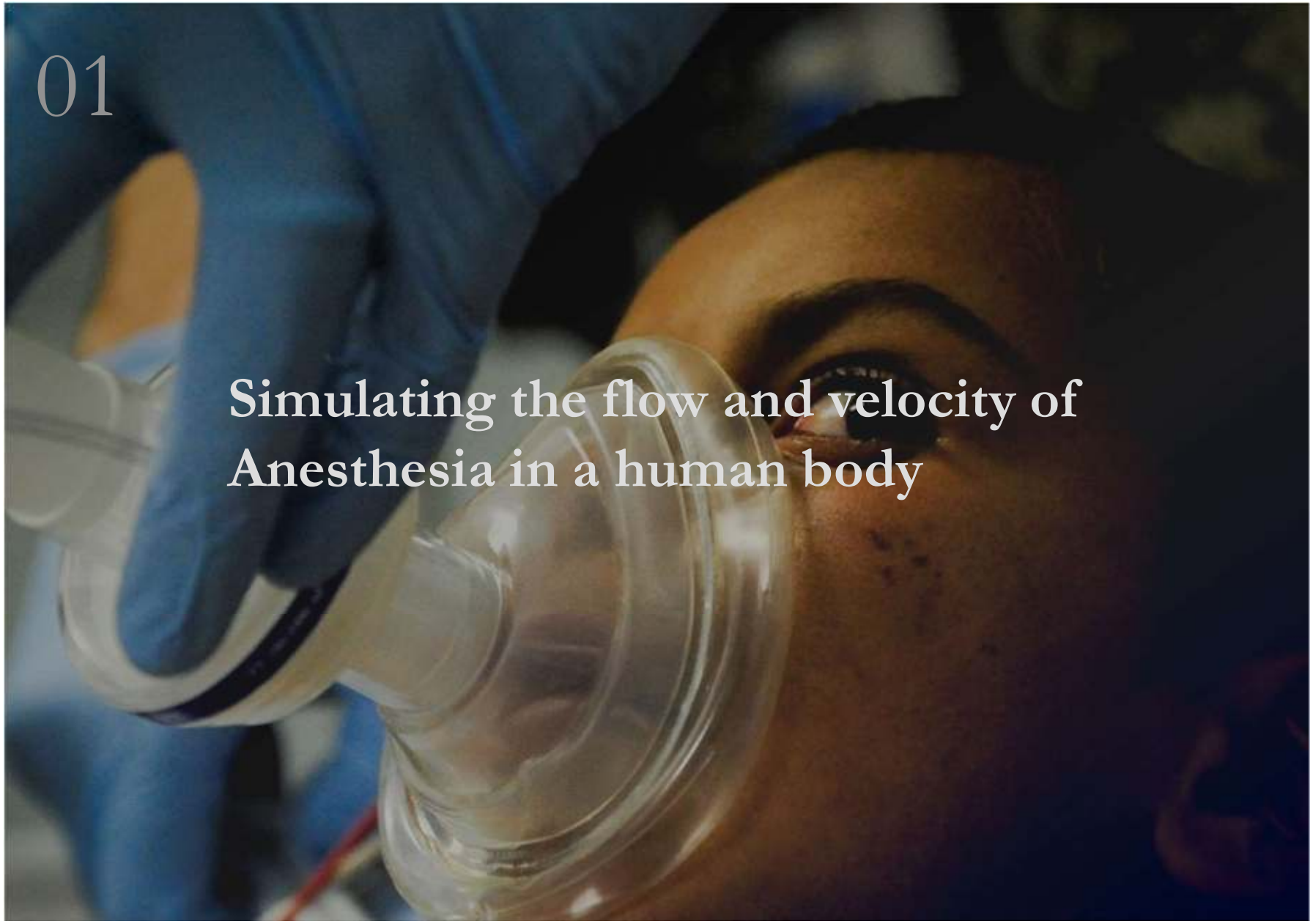
Looking at other industries from a software Project perspective

In retrospective









01

Simulating the flow and velocity of Anesthesia in a human body

02

Cost estimation and planning of a cement fabric with all its complexities - and similarities


03
Moving a lighthouse
70 meters

Looking at other industries from a software Project perspective

In retrospective

Why are these cases relevant?

Why do IT projects fail?

What could support the success of software projects?

The single most important task of a project:

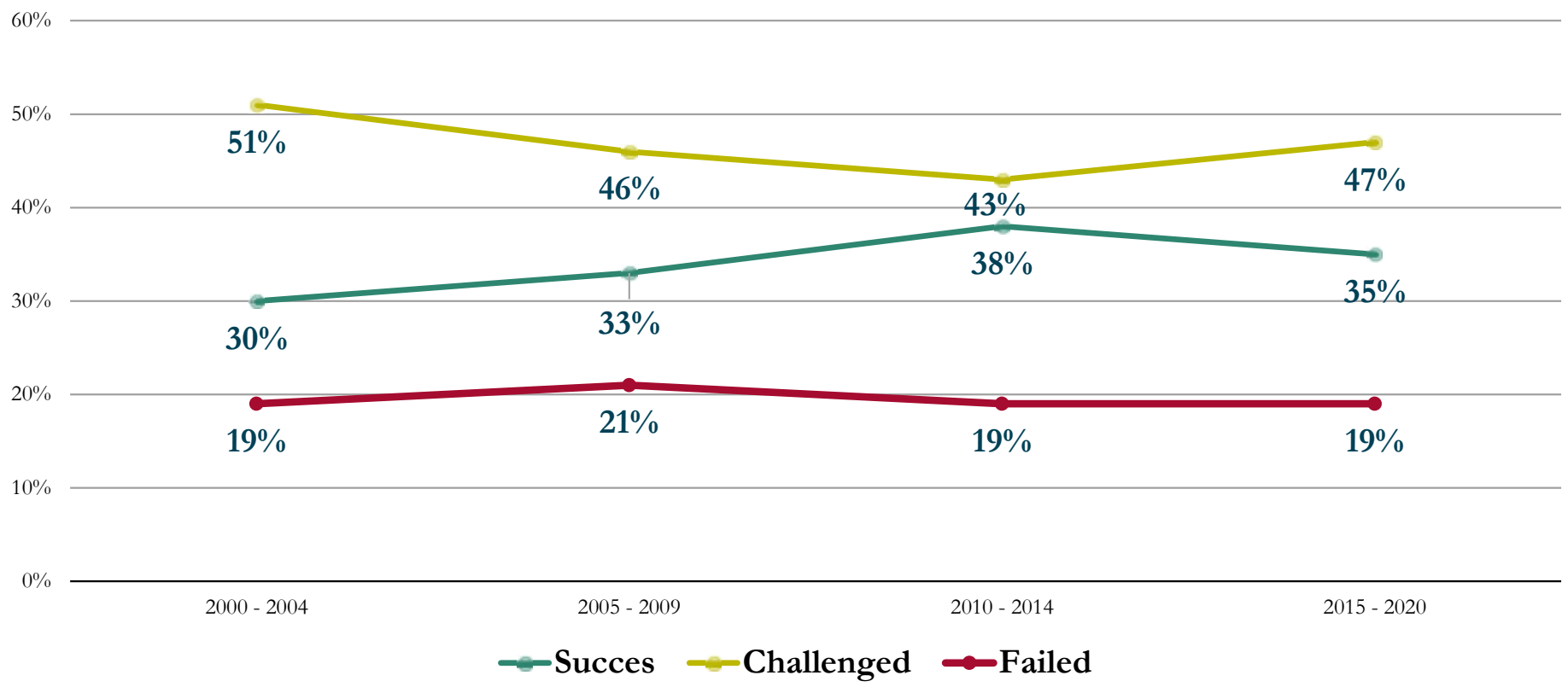
setting realistic expectations.

Unrealistic expectations based on inaccurate estimates are the single largest cause of software failure.

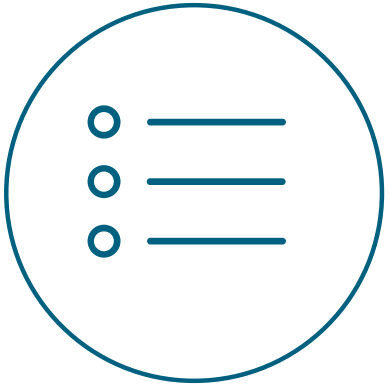
Source: Futrell, Shafer and Shafer "Quality Software Project Management", 2002

What are *realistic* estimates?

The improvement of successful project is missing



Scope as the Influencing Factor



Scope

…they fail to deliver within the combined objectives and requirements needed to complete a project

Time as the Influencing Factor

Time

Scope

…they fail to deliver within the planned time and schedule

Budget as the Influencing Factor

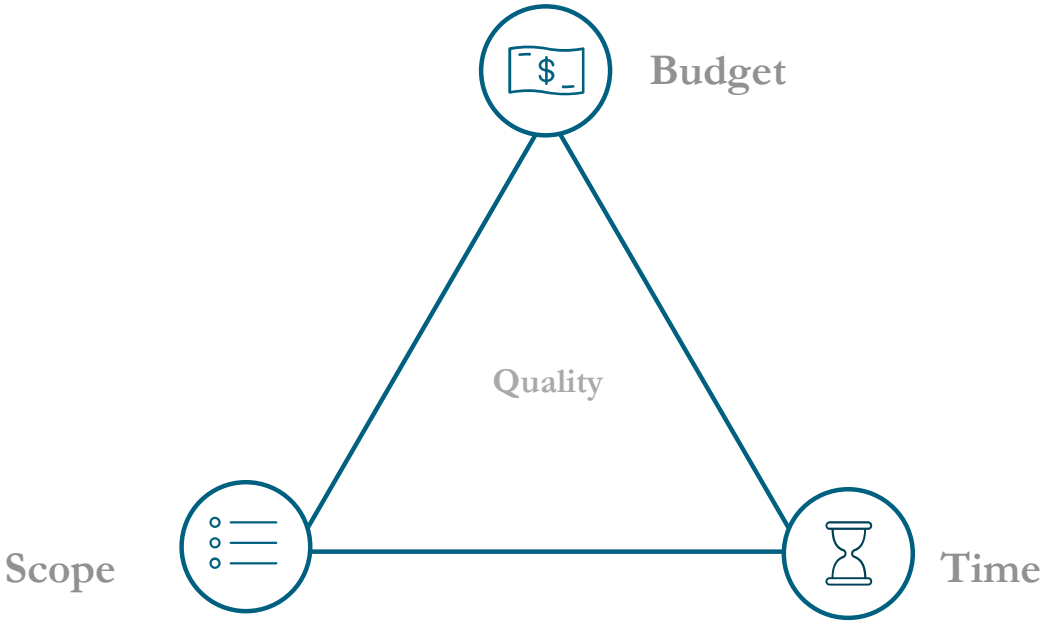
Budget

Time

Scope

…and they fail to deliver within the estimated budget

Which all together diminishes the expected value and quality of a project



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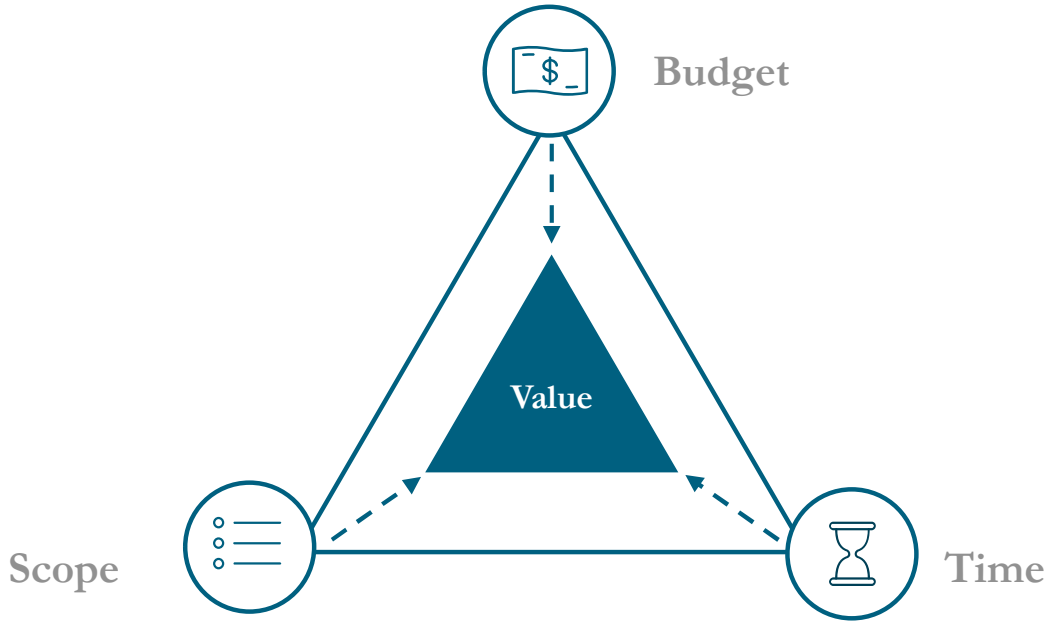
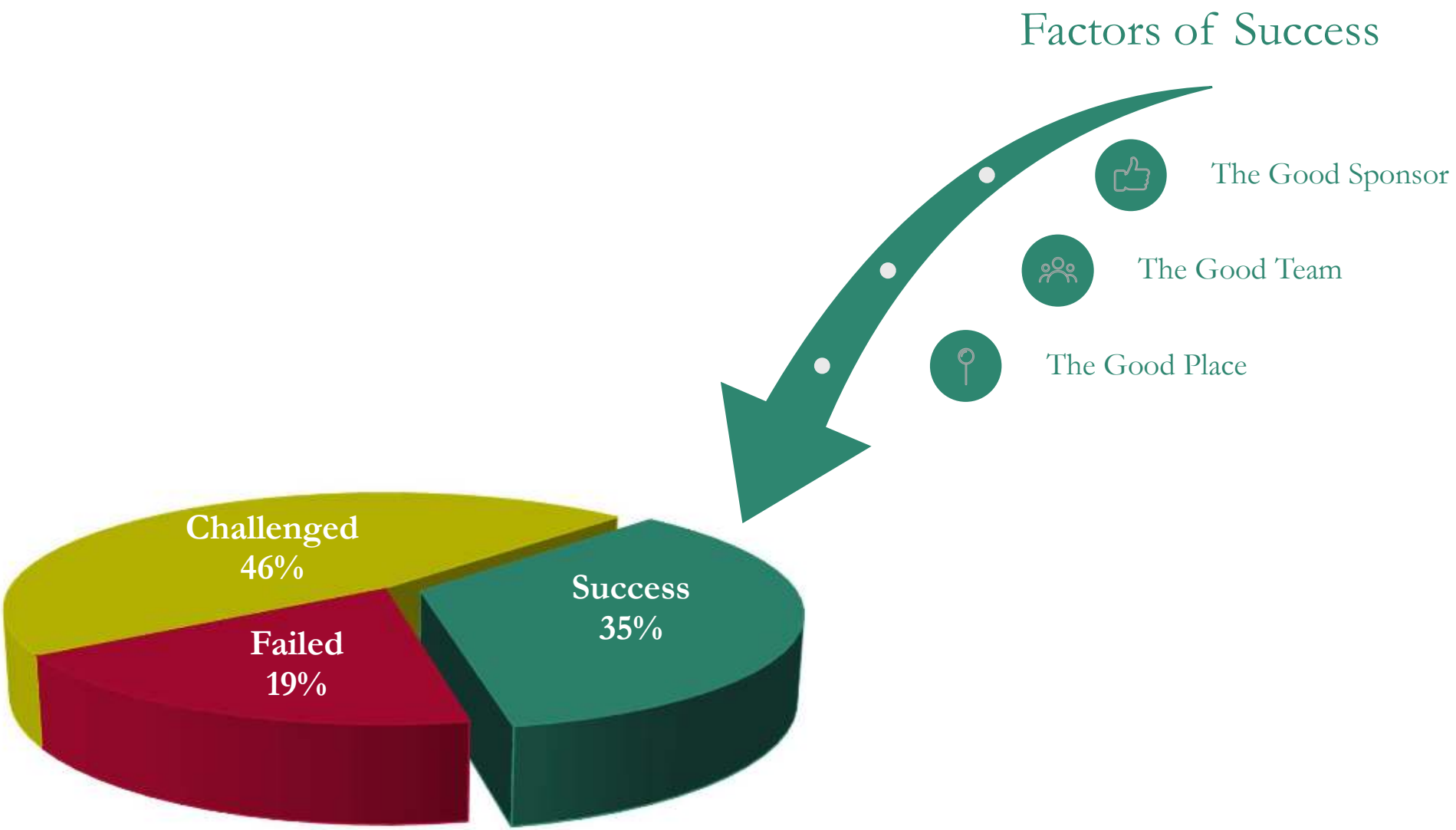
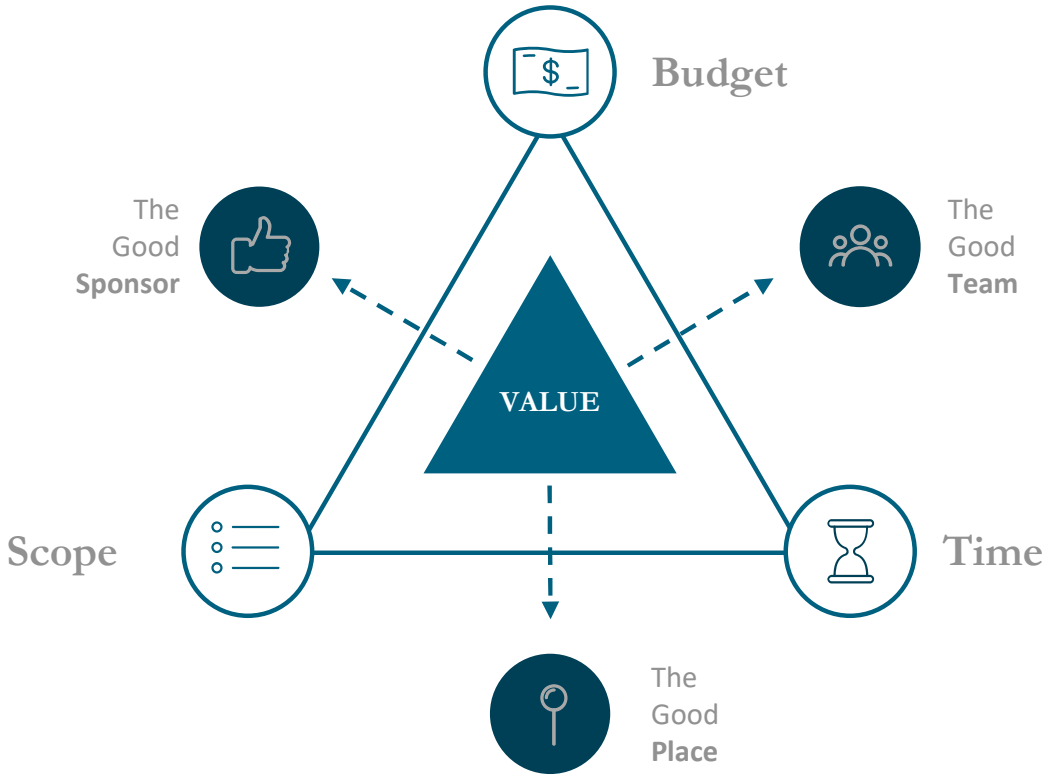


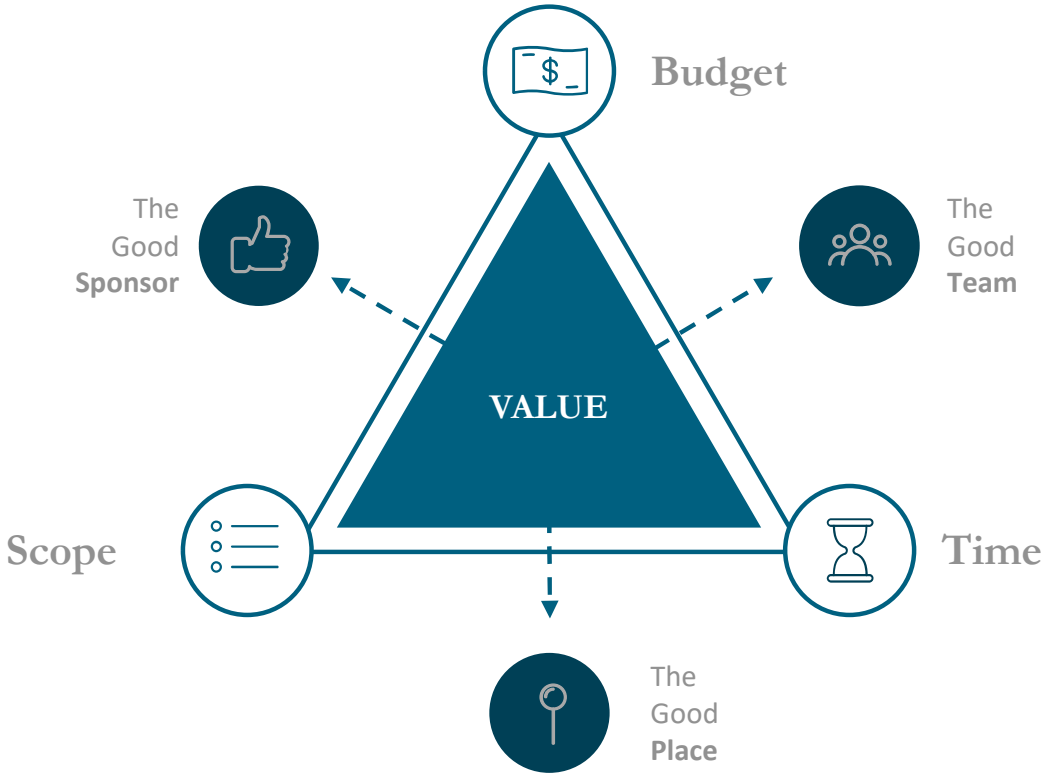
What makes the 35% of all IT projects turns out as a success?



The improvement needs to focus on the factors of success and reason for failure



Having the good sponsor, the good team, and the good place can *unlock* more value of an IT project



How to unlock more value through estimation?

One method is
Function Point Analysis

Function Point Analysis (FPA)

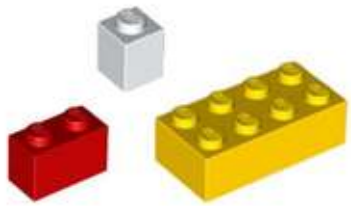
Function Point Analysis (FPA) is a method for Measuring and/or Estimating the functionality of a software project

International Function Point Users Group

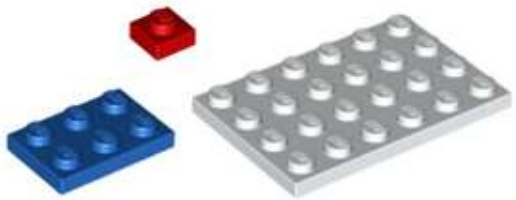
What does it take to build a LEGO construction?

Simple construction ⟷ Complex construction

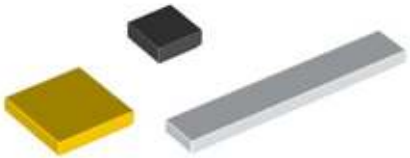
…it certainly depends on the requirements



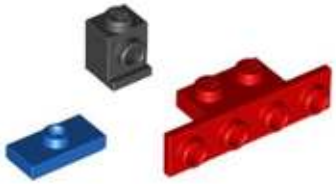
Bricks



Plates



Tiles



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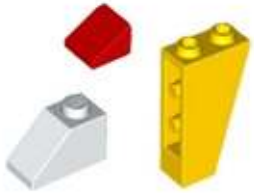
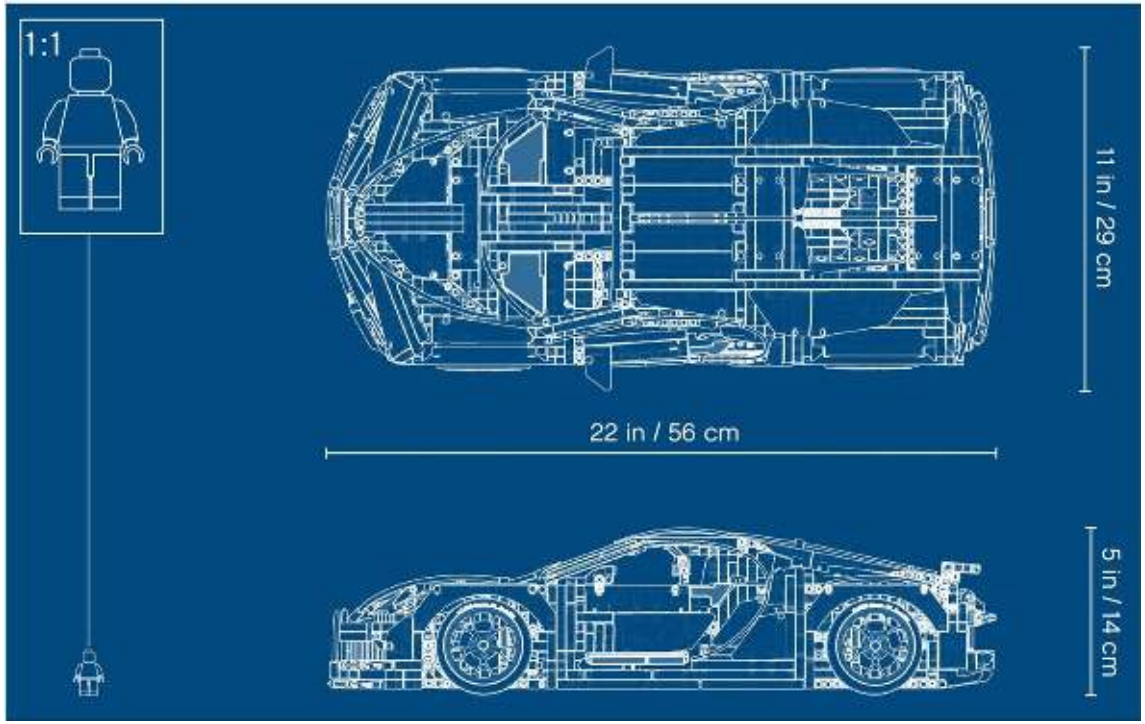


Slope

Technic

How accurate you know the requirements



…and the expertise at hand

Low expertise

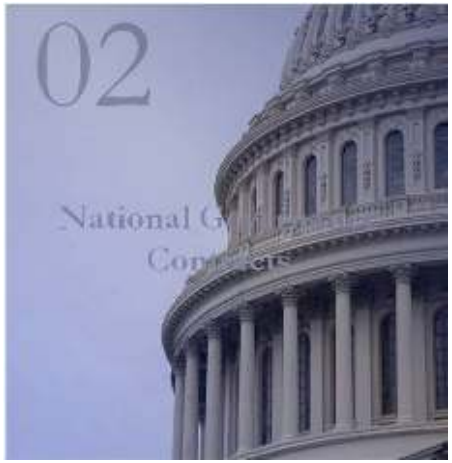
High expertise

The Technology & Methodology you use

Function Point Analysis used as a relevant methodology?

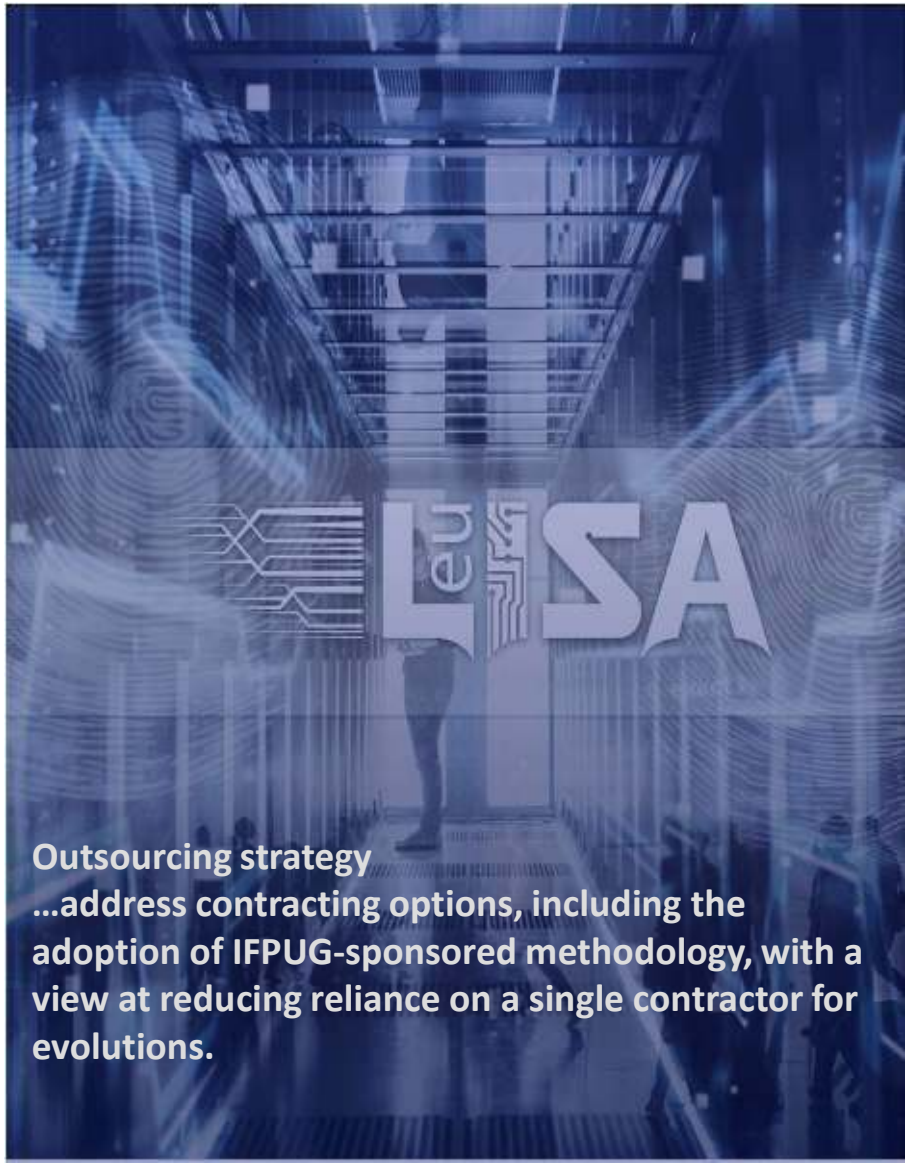
Governments' Usage

- Request for Proposal Evaluation
- Competitive pricing Evaluation
- Monitoring and Control of deliverables
- Quality Assurance Measurement
- Scenario Evaluation

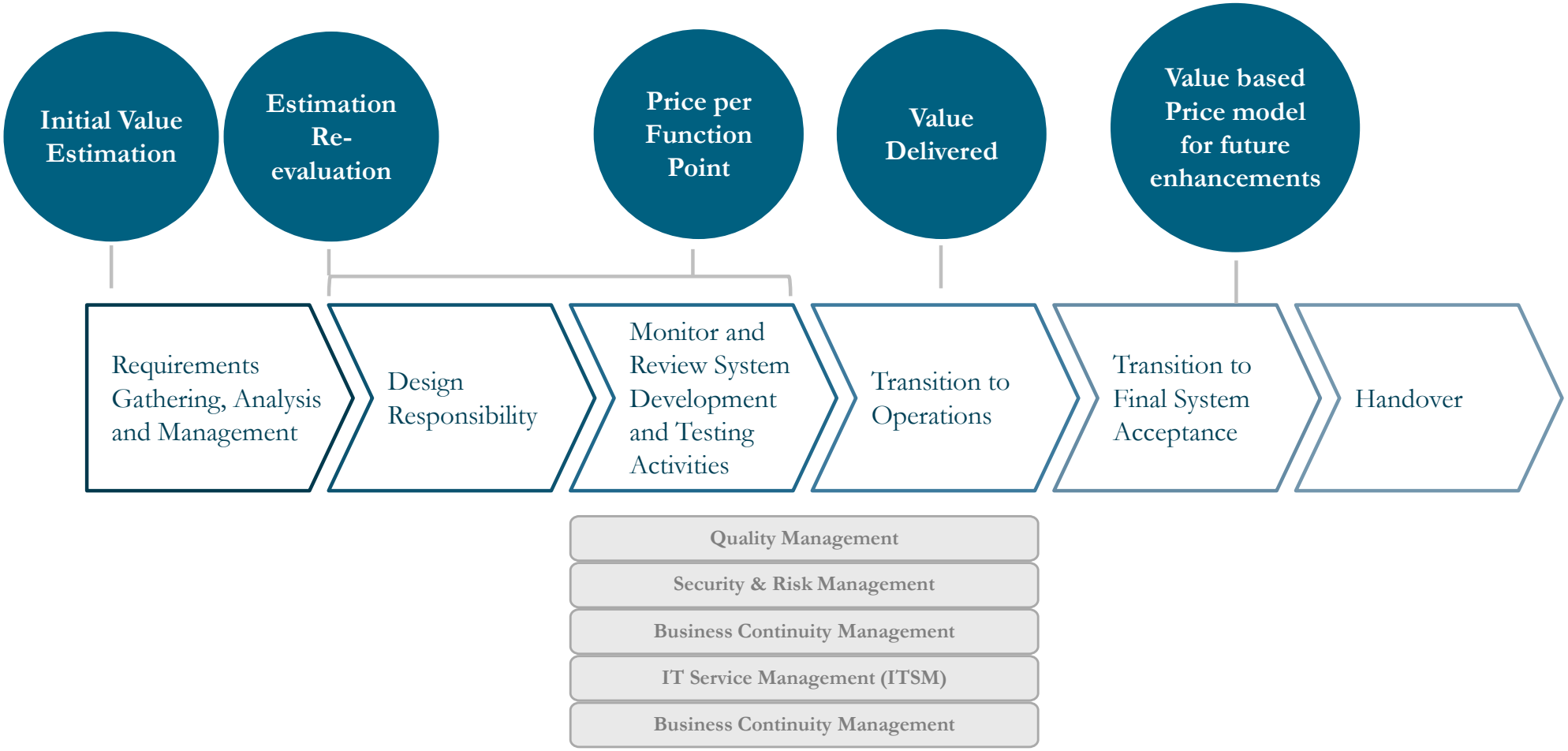


EU uses FPA

- Competitive Price evaluation
- Price per FP
- Monitoring and Control of Scope
- Scenario analysis



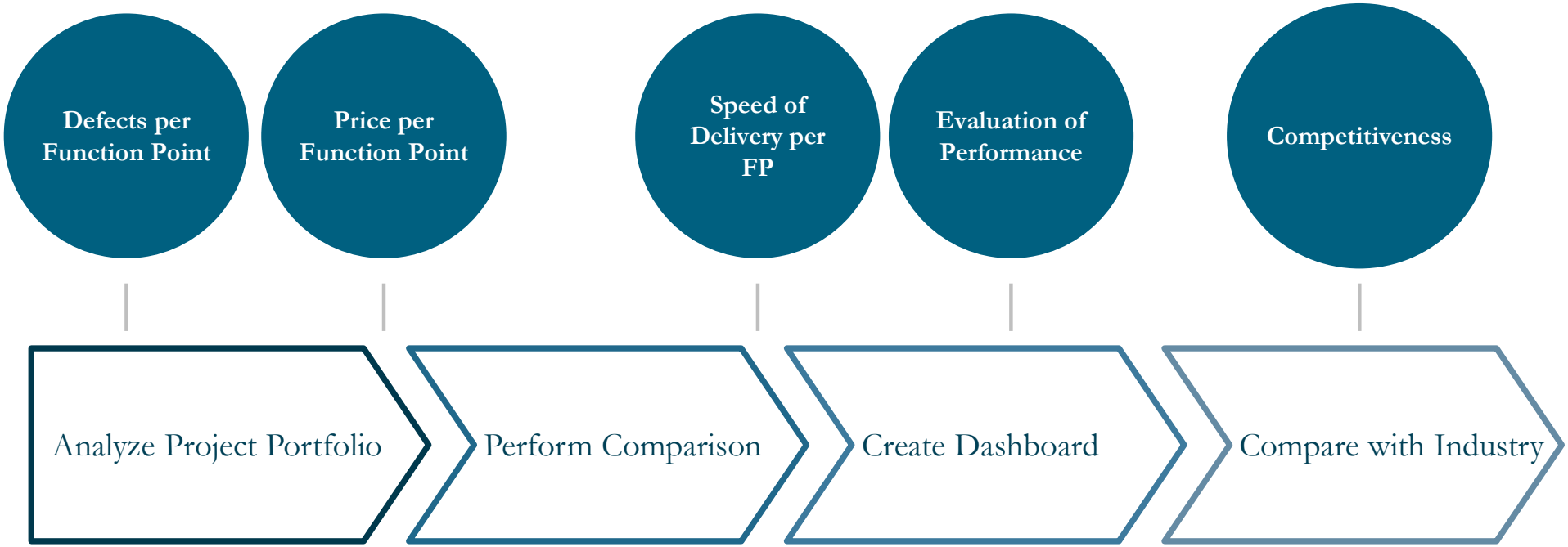
Realistic Schedule and Competitive Pricing



Private Sector Comparison

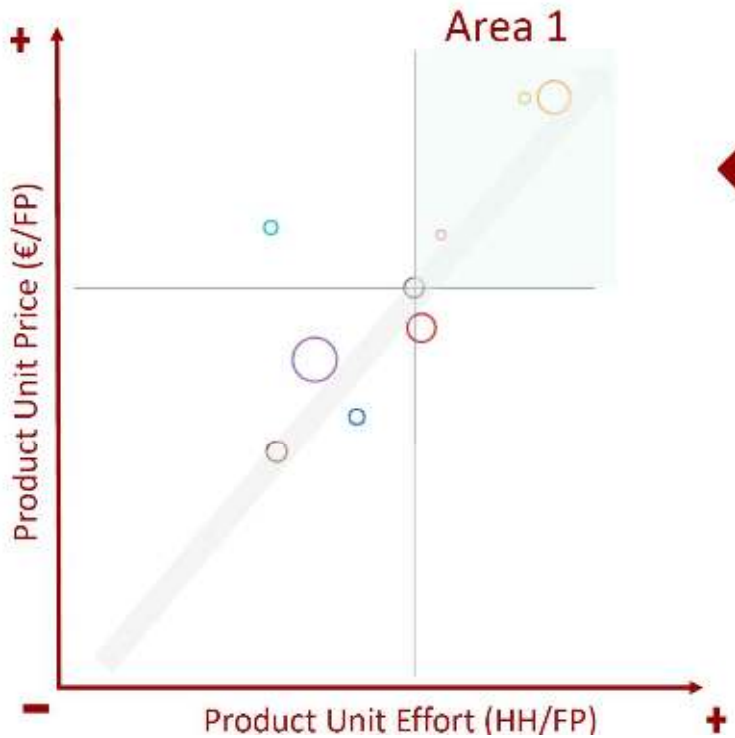
- **Estimation comparison on RFP**
- **Monitoring and measuring of software**
- **Supplier Evaluation**
- **Price negotiation**

How the private sector companies perform FPA



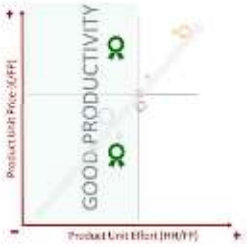
Evaluating suppliers through FPA

You can analize if your rates are (or aren't) well balanced with the effort required by the vendors.



Vendors who require more effort and price per FP.

They should improve their productivity.

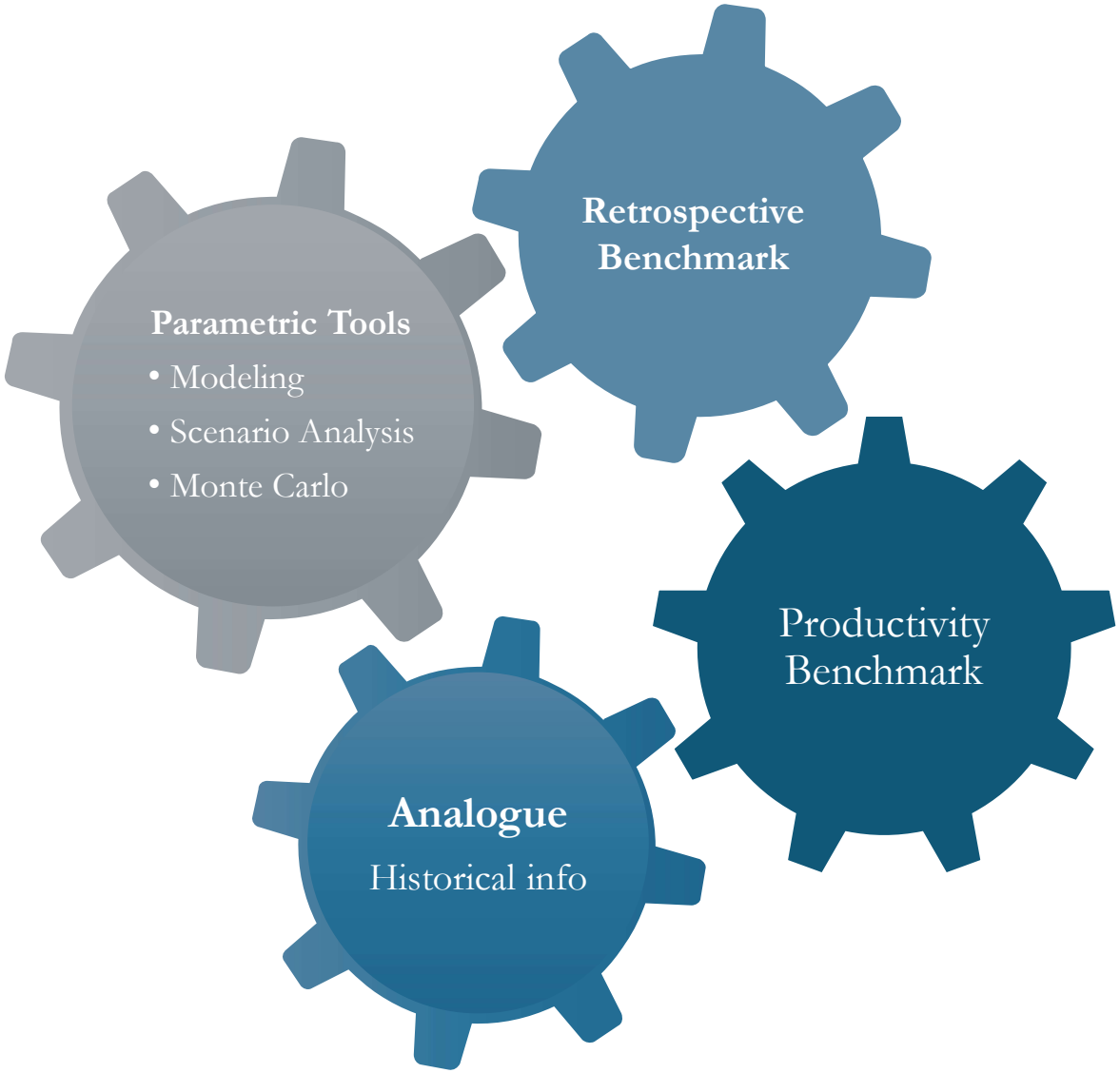


Source: LEDAmc

Example – a reduction of 32% of Yearly IT Budget

CG13
KT70
CG14

Usage of FPA for Project Budget



Slide 44

CG13 Lad os added denne...
Christine Green, 17/03/2021

KT70 Der er stort sammenfald mellem denne og nøste slide skal den næste slettes er det det du mener?
Kamma Tulinius, 17/03/2021

CG14 Ja - og så også lægge denne slilde til General Graphic - Estimation
Christine Green, 18/03/2021

Parametric Estimation Tool

NATO Case

With its initial proposal the vendor requested a project budget of **€7.2Million**. Using the risk-based estimates generated from SEER, NATO were able to negotiate a project cost **€4.1Million**, a saving of 43%. Instead, the usual **5%-10%** expected through traditional negotiations.

Data-driven estimation is seen as a fundamental part to the success of project delivery within NATO.

Source: Galorath

Value & Velocity measures

The Project Specific

Specific Adjustment Factors & Expectations
- Could be organizational defined, SNAP, Risk, etc

The Functional Scope

The Size of the Business Process – The Functionality as seen by the user

The Teams Performance

The effectivity level of your teams – The delivery capacity in total.

Other Benefits of FPA

A Certified FP Specialist is an expert in bridging between User, Technical and Planning needs

FPA
Function Point Analysis
CONSISTENT AND STABLE SOFTWARE SIZE

- **Consistent and Stable Software Size**
- **A process more than a single number**
- **Strengths in its definition and usage**
- **The best scope management and control methodology in the world**
- **The high-level perspective of landscape and business coverage**
- **The Requirement traceability and control from a user's perspective**
- **The visibility that is required from Business Process to Software testing**
- **The quantitative measure between Purchaser and Delivery organization**
- **Strength is in the consistency**
- **Early, detailed and controlled – can evolve and change**
- **The visibility from Business Process to Software delivery acceptance**

The Process for scope illumination, control and measurement

How to start using Function Point Analysis in your organization?

Recommendations for achieving successful IT Projects

PROFESSIONALISM	Estimation & forecast with a professional approach
SIZE AND PRIORITIES	Size and priorities the project requirement and value
CONTROL	Control your project and process – quantify and validate

Remember

Successful IT Budgets is a combination of Science and Art

I believe that by using Function Point Analysis we can improve the success rate of software projects

Add a Certified FP Specialist (CFPS) to your team

- ***Thank you!***

- ***If any questions, feel free to ask in the comment section***

QUESTIONS?

Christine Green

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