



The global and independent source
of data and analysis for the IT industry

and



nesma

present this webinar about

PRACTICAL APPLICATIONS OF ISBSG DATA

March 2023

Harold van Heeringen

Nesma board member

ISBSG Board director

IDC Metri Principal Consultant and Practice Lead



Introduction Harold van Heeringen

- Principal Consultant at **IDC Metri** and Global Practice Lead IT Intelligence services
- 25+ years experience in the IT industry
- Immediate Past President International Software Benchmarking Standards Group (**ISBSG**), Board member **Nesma**.
- Main expertise: fact-based Application Development and Maintenance & Support decision-making based on data, including:
 - Agile Team Performance Assessments
 - Agile Value Management
 - Software Cost Estimation
 - Output-based contracting (of agile teams)
 - Portfolio Quality and Risk Assessments
 - Software Sizing: Nesma, IFPUG and COSMIC FSM
 - Vendor bid support
 - Software Quality and Risk Assessments and improvements plans



harold.van.heeringen@nesma.org

Topics for today

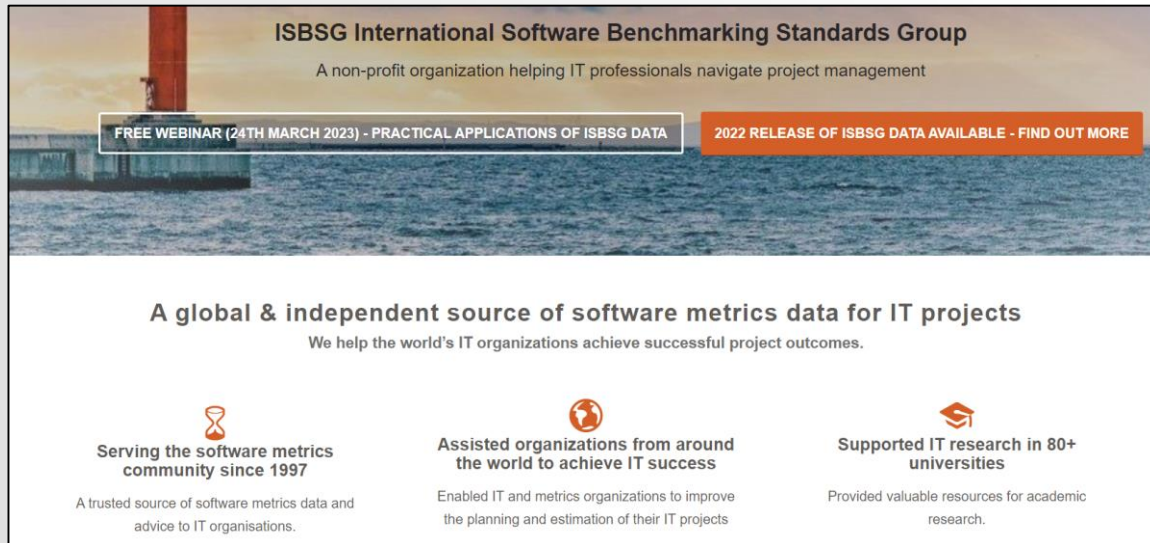
- A brief introduction of ISBSG and Nesma
- The importance of functional size measurement
- The ISBSG data – how does it look like and what can we do with it?
- A few practical cases:
 - Agile Value Management
 - Software Cost Estimation
 - Output-based contracting
- To conclude and take aways





Brief introduction to ISBSG and Nesma

A BRIEF INTRODUCTION OF ISBSG AND NESMA






ISBSG International Software Benchmarking Standards Group
A non-profit organization helping IT professionals navigate project management

FREE WEBINAR (24TH MARCH 2023) - PRACTICAL APPLICATIONS OF ISBSG DATA

2022 RELEASE OF ISBSG DATA AVAILABLE - FIND OUT MORE

A global & independent source of software metrics data for IT projects
We help the world's IT organizations achieve successful project outcomes.

-  **Serving the software metrics community since 1997**
A trusted source of software metrics data and advice to IT organisations.
-  **Assisted organizations from around the world to achieve IT success**
Enabled IT and metrics organizations to improve the planning and estimation of their IT projects
-  **Supported IT research in 80+ universities**
Provided valuable resources for academic research.

www.isbsg.org



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Nesma goes China 中国·北京/ 5月27日

HOW A SMALL ORGANIZATION CAN HELP A GREAT NATION

Nesma is partnering with SPI China to help improve the Chinese software industry.

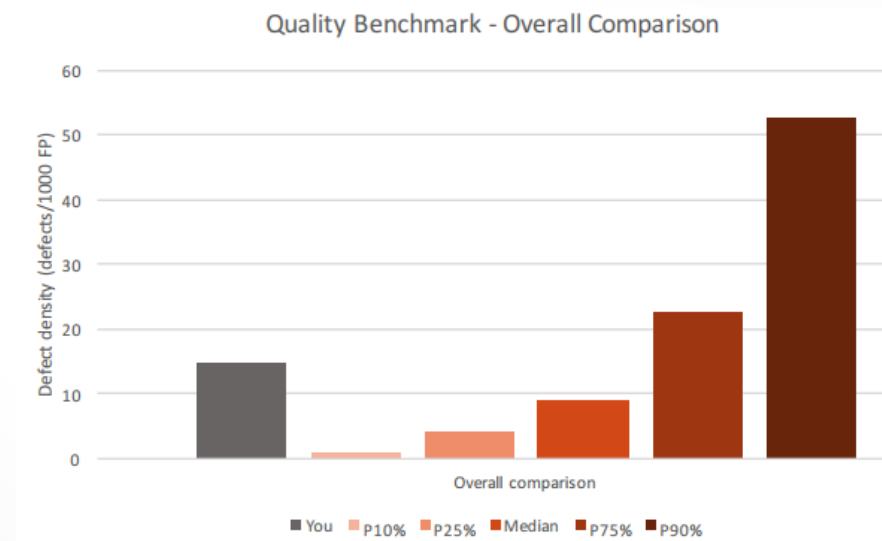
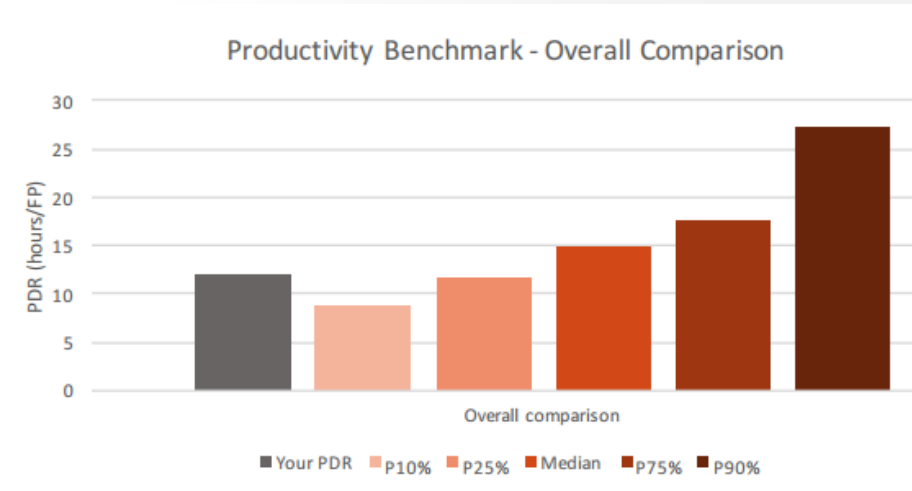
[READ THE BLOG](#)

Your starting point for successful software projects

www.nesma.org

INTERNATIONAL SOFTWARE BENCHMARKING STANDARDS GROUP (ISBSG)

- Mission: “To improve the management of IT resources by both business and government, through the provision and exploitation of public repositories of software engineering knowledge (data) that are standardized, verified, recent and representative of current technologies”.
- Independent and not-for-profit organization based in Australia.
- Members are not-for-profit organizations, including Nesma.
- Grows and exploits two repositories of software data:
 - New development projects and enhancements (D&E) - **11281 projects, releases and sprints.**
 - Maintenance and support (M&S) - **> 1100 applications.**
- Everybody can submit project data:
 - Questionnaires on the site, online or Excel data files
 - Anonymous
 - Free benchmark report in return
 - <https://www.isbsg.org/submit-data/>



Nesma is the starting point for **making software measurable** to make fact-based decisions on the business value of software, so software can be deployed successfully. Nesma connects organizations and individuals who are involved in making software measurable and is the center of knowledge in the field of **software measurements and cost engineering** for IT.

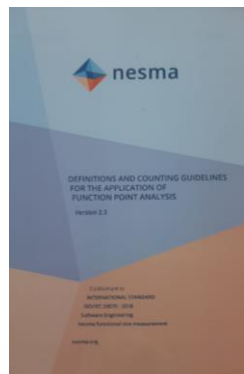
Nesma is: Not-for-profit, Independent, Objective, Organized and Managed by volunteers, Active and Progressive.


It's the Nesma mission to:

- Spread knowledge about *software measurement* and *software metrics*;
- Act as a *Body of Knowledge* for the industry regarding the use of software metrics in all business areas;
- Remain independent, objective and *not-for-profit*;
- Research the applicability of software metrics in *all business areas*;
- *Connect relevant organizations* in the industry that Nesma feels are expert in one of the areas where software measurement and metrics are important;
- Produce *relevant guidelines, reports and other information products* that are useful for the software industry;
- Produce a platform where people can discuss issues they experience with software measurement and metrics or where they can *exchange ideas and/or knowledge*.

Nesma governs one of the three main ISO standards for functional size measurement: **Nesma ISO24570:2018**

(Available in Dutch, English and Chinese: physical and digital).






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Nesma: Metrics and more

In a world that is becoming more and more agile, metrics are an indispensable base for managing the essentials of your software project: quality, cost and time. Nesma provides you with valuable information about software metrics and measurements, and the way metrics support your road to successful and cost-effective software projects.

LEARN MORE

Your starting point for successful software projects

Sizing and more

Nesma has its origin in measuring the size of software. Today, size and other metrics form the base for many activities that play a role in successful and cost-effective software projects.

Learn more

SW Cost Estimating

Estimating cost and managing budgets is very important in software projects. Together with ICEAA and with support of international organizations, Nesma is involved in establishing a Software Cost Estimating Body of Knowledge (sCEBoK).

Learn more

Publications

Nesma offers a combination of both free and paid publications that are helpful for you as a metrics professional. Take a look at these publications and raise your level of knowledge!

Learn more

In the spotlight



The importance of Functional Size Measurement
ISO/IEC 14143

The Importance of functional size measurement



Dr. Eli David  @DrEliDavid · Mar 3

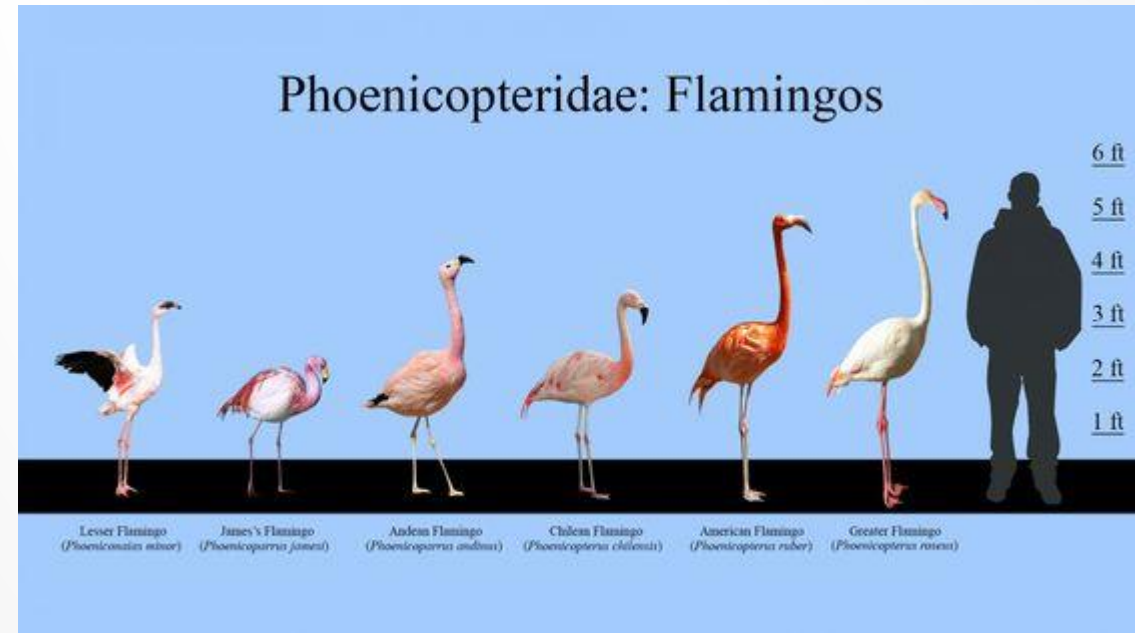
- "Should we use feet or meters as units of measurements?"
- "Hmm, let's got with **flamingos** 🦩"

Asteroid the size of 14 flamingos to skim past Earth Wednesday - NASA

By AARON REICH Published: MARCH 1, 2023 16:02



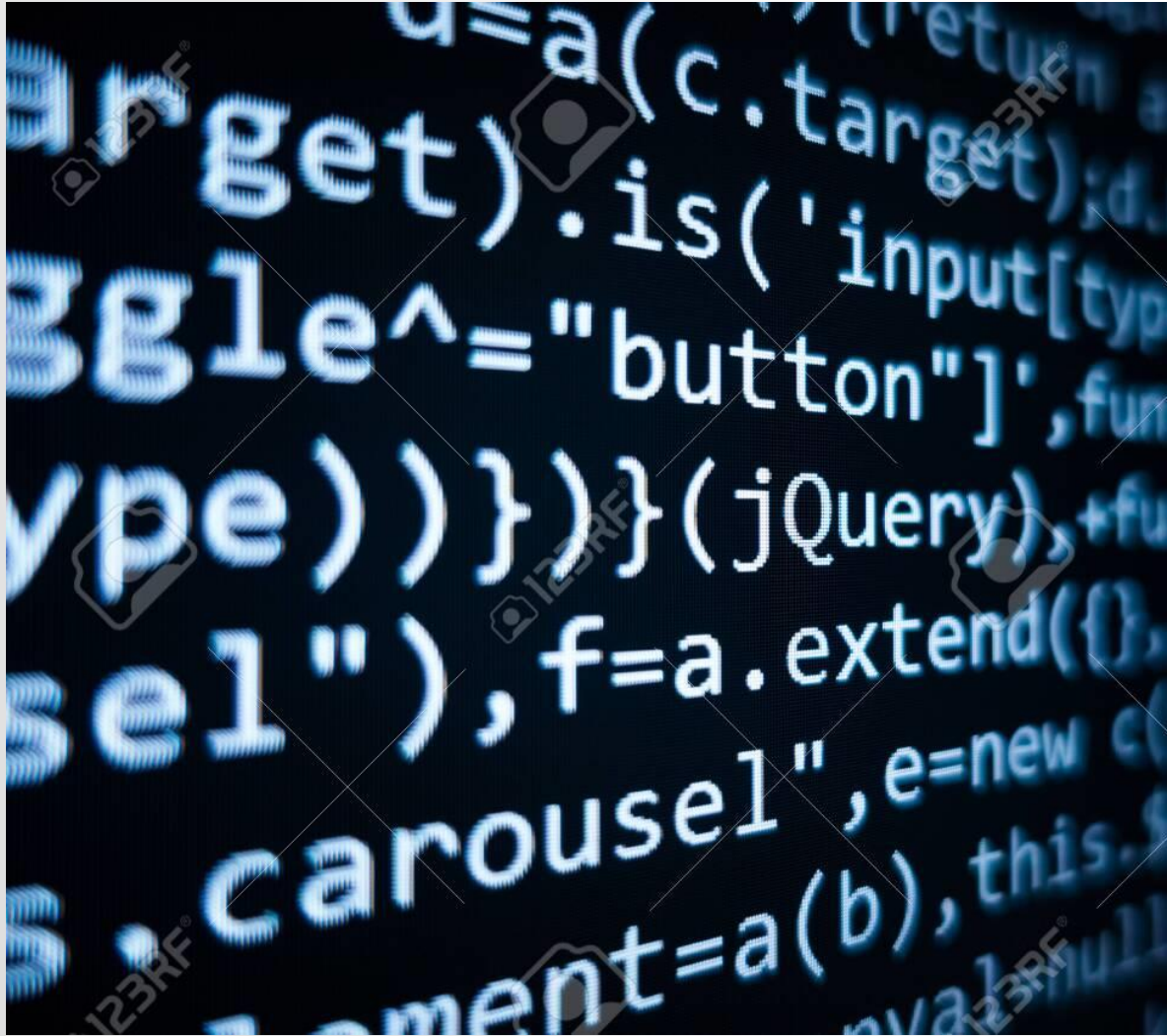
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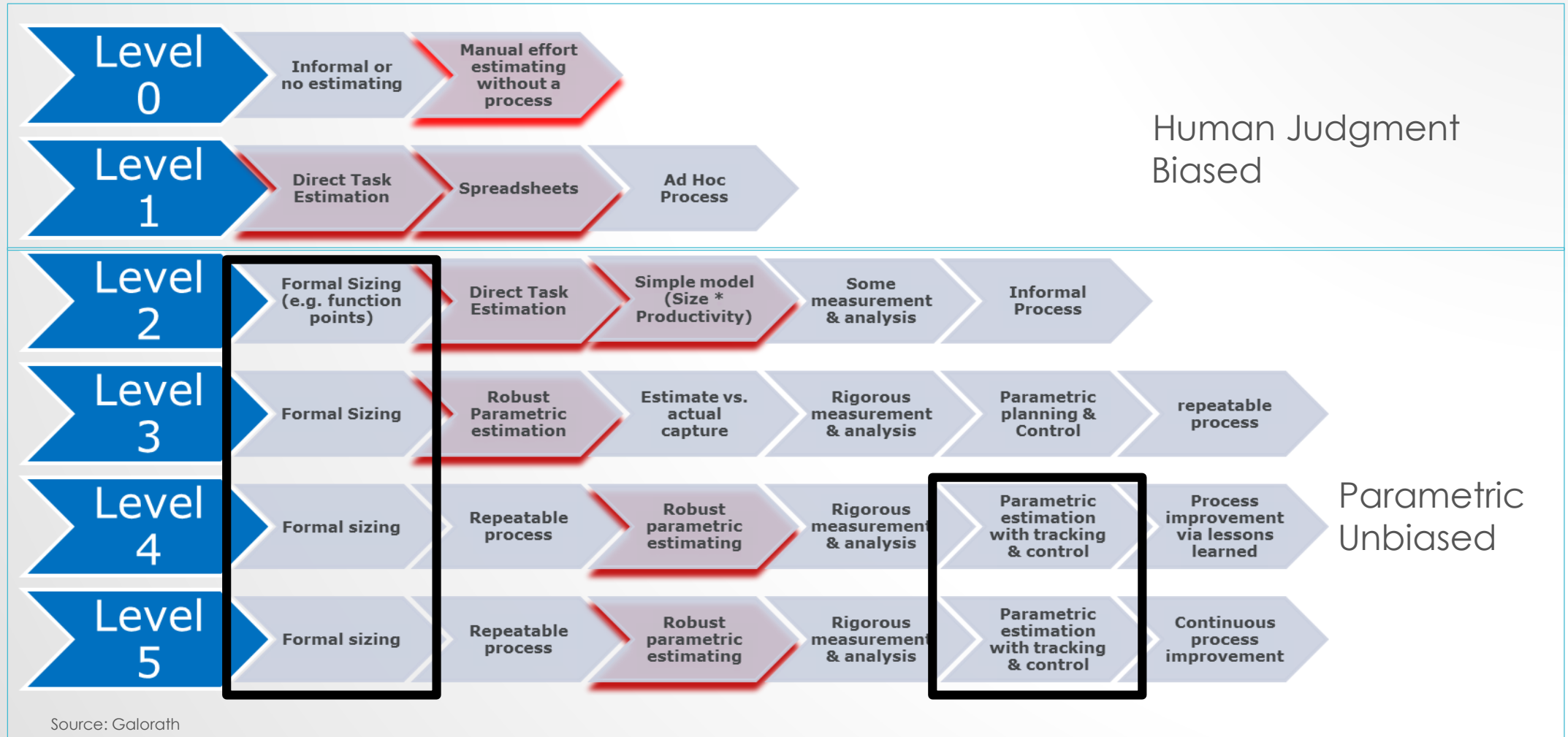
<https://twitter.com/DrEliDavid/status/1631723331253674003>

<https://www.zoochat.com/community/media/flamingos-size-chart.404558/>

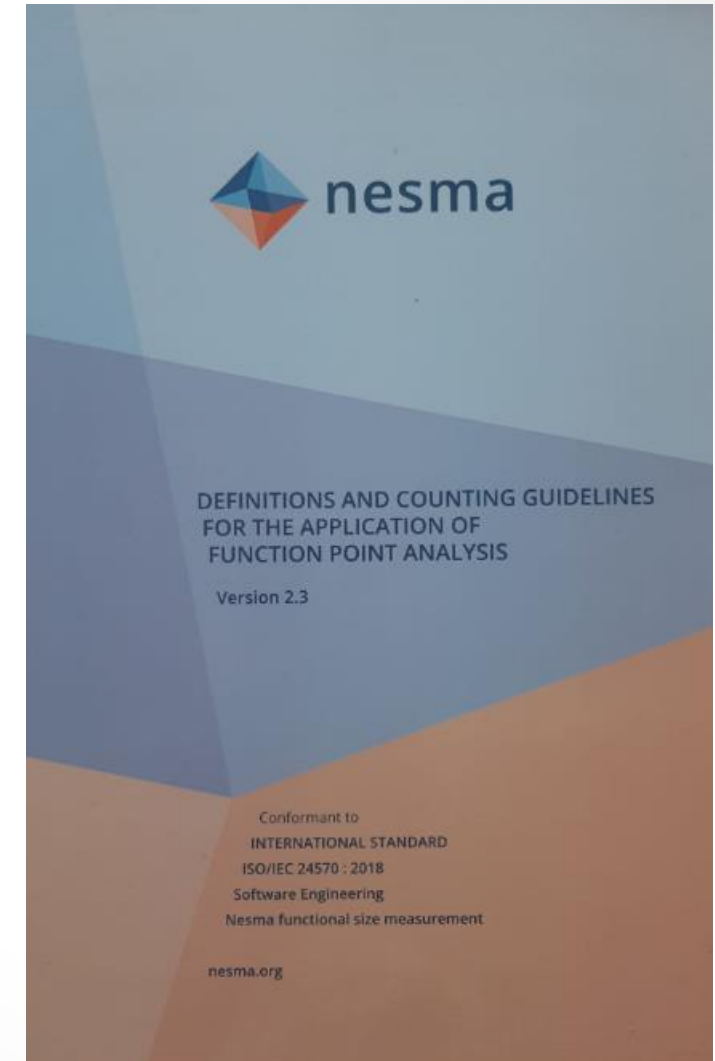
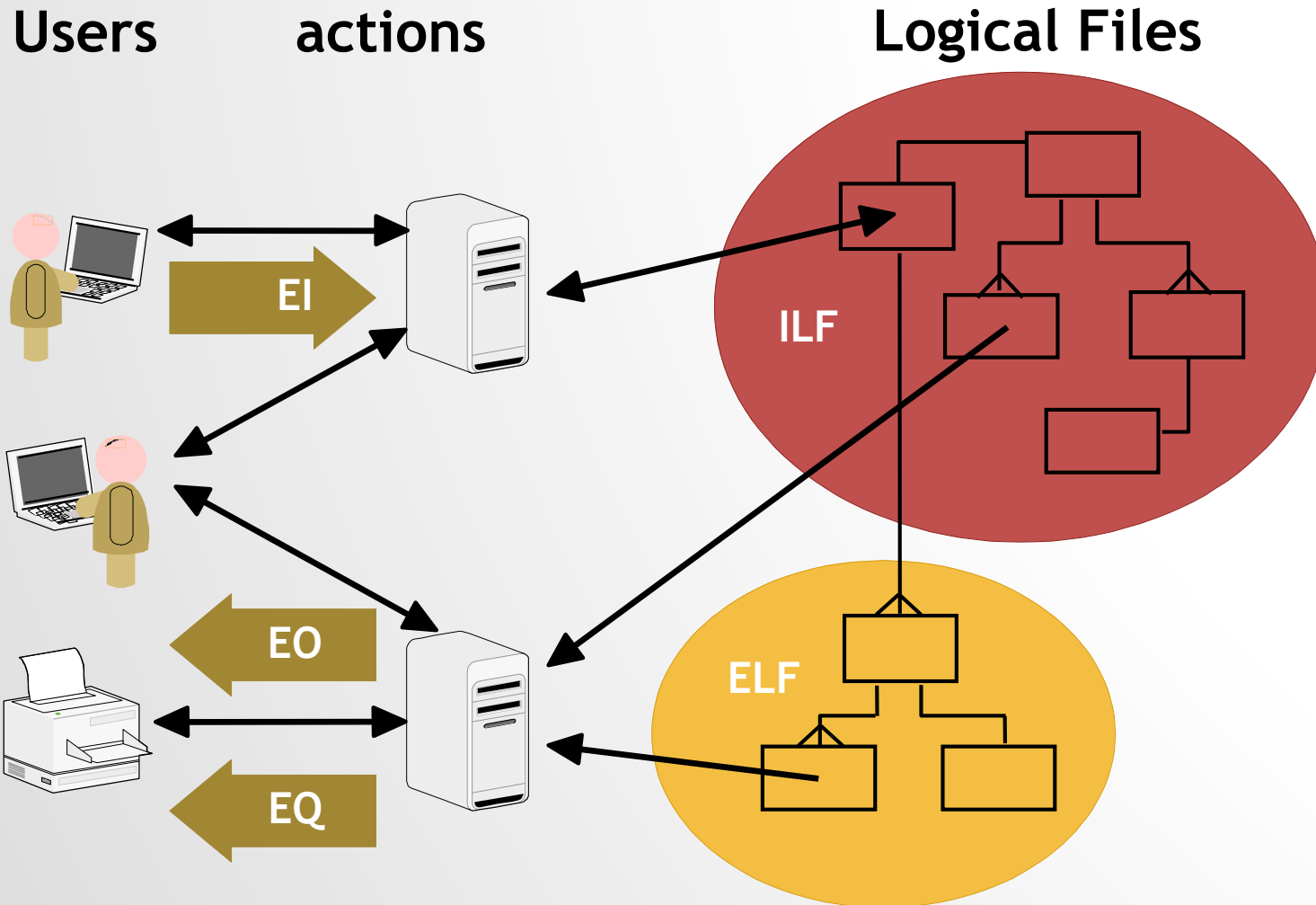
Software is hard to measure?



Software Cost Estimation



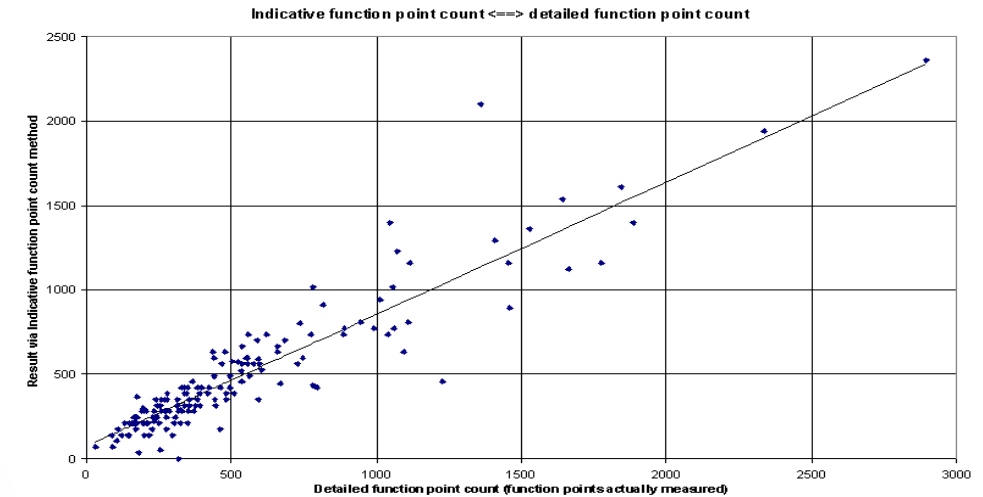
Functional Size Measurement (Nesma/IFPUG)



Nesma FP – detail/estimated/high-level

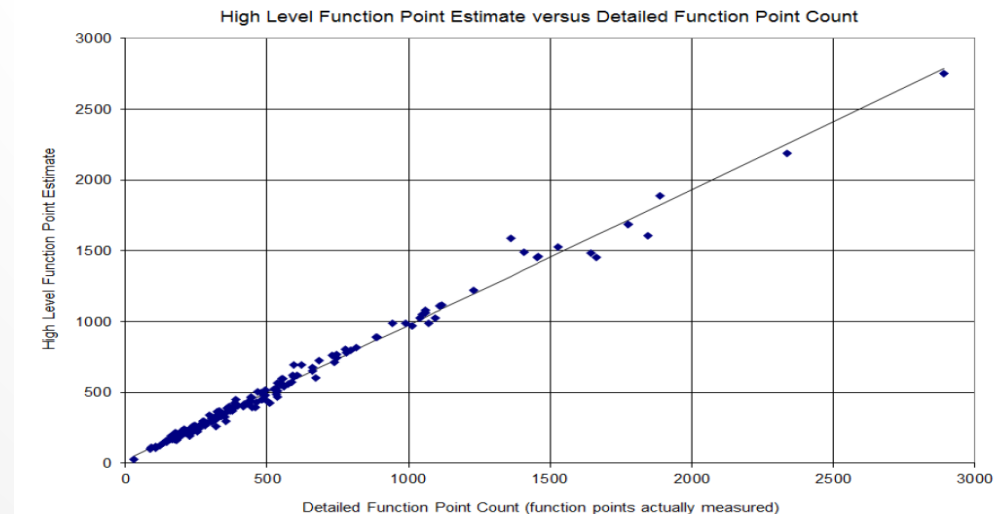
Indicative FPA

BFC-type	Conceptual Data model	Normalized Data model
ILF	35 FP	25 FP
ELF	15 FP	10 FP



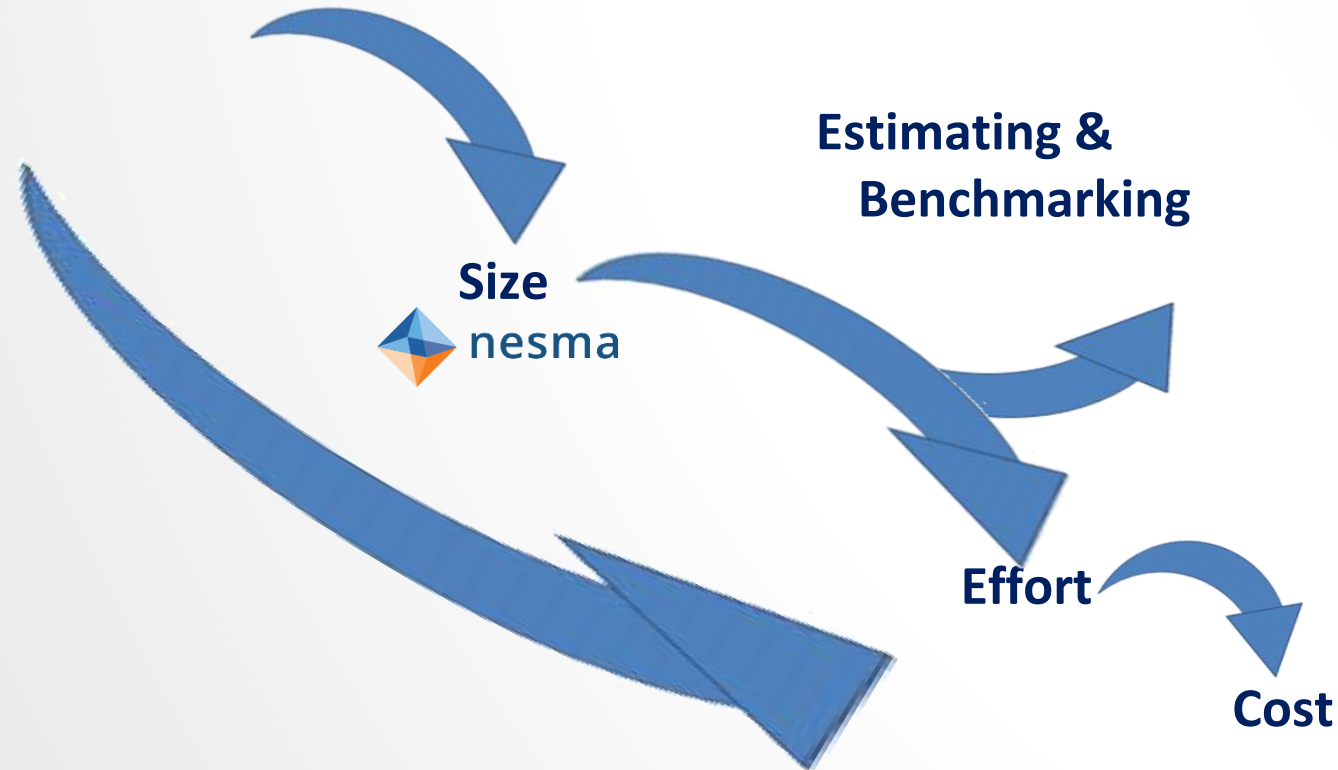
Approximate / Estimated FPA

BFC-type	Simple	Average	Complex
ILF	7 FP	10 FP	15 FP
EIF	5 FP	7 FP	10 FP
EI	3 FP	4 FP	6 FP
EO	4 FP	5 FP	7 FP
EQ	3 FP	4 FP	6 FP



Sizing allows estimation and benchmarking

**Application, Project,
Release or Sprint**



Metric	PDR (h/FP)
N	151
Min	2,1
P10	5,0
P20	6,1
P30	6,7
P40	7,2
Median	7,8
P60	8,7
P70	9,4
P80	11,2
P90	12,6
Max	76,6
Avg	10,6

1000 FP

6700 – 7800 – 9400 effort hours



The ISBSG data – how does it look like and what can we do with it?

ISBSG data to support making business decisions

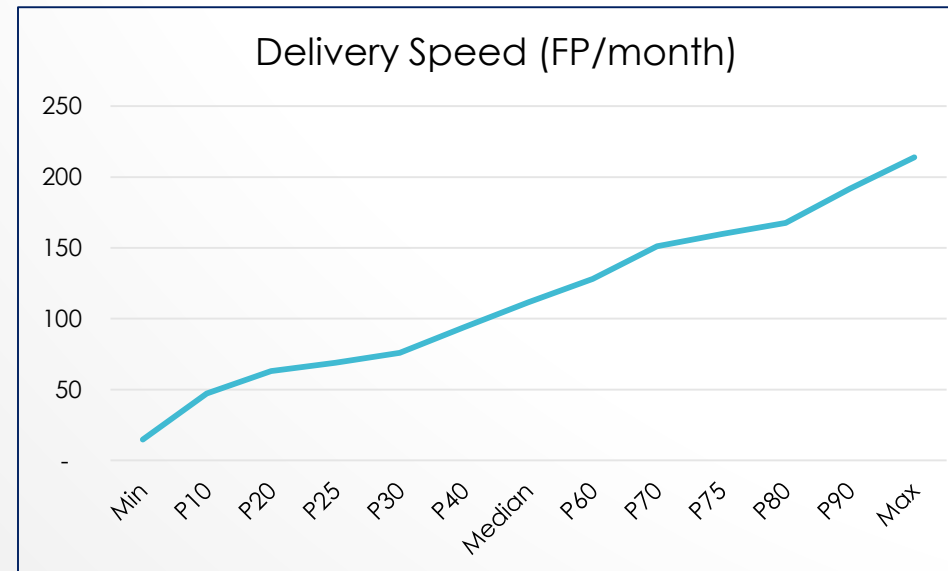
11281 rows, 251 columns

ISBSG Project ID														
Rating		Rating	Software Age	Major Grouping	Major Grouping	Major Grouping	Major Grouping	Major Grouping	Major Grouping	Major Grouping	Major Grouping	Major Grouping	Major Grouping	Major Grouping
Data Quality Rating		UFP rating	Year of Project	Industry Sector	Organisation Type	Application Group	Application Type	Development Type	Development Platform	Language Type	Primary Programming Language	Count Approach	Functional Size	Relative Size
10016	B	B	2019	Construction		Business Application	Customer relationship management;	Enhancement		4GL	Oracle	NESMA	745	M2
10051	B	A	2021	Communication	Telecommunications;	Business application	Stock control & Order processing;	Enhancement		3GL	C	IFPUG 4+	103	M1
10089	B	A	2021	Communication	Telecommunications;	Business application	Customer Relationship management;	Enhancement		4GL	Amdocs framework	IFPUG 4+	222	M1
10148	B	A	2020	Communication	Telecommunications;	Business Application	Customer relationship management;	Enhancement		4GL	Amdocs framework	IFPUG 4+	60	S
10197	B	A	2020	Mining		Business Application	Multimedia;	Enhancement		4GL	Oracle	NESMA	1.778	L
10206	B	A	2020	Communication	Telecommunications;	Business Application	HR Management;	Enhancement		4GL	ABAP 4	IFPUG 4+	111	M1
10297	B	A	2021	Communication	Telecommunications;	Business application	Other;	Enhancement			Unknown	IFPUG 4+	88	S
10346	B	A	2020	Communication	Telecommunications;	Business Application	Customer relationship management;	Enhancement		4GL	Amdocs framework	IFPUG 4+	95	S
10366	B	A	2021	Communication	Telecommunications;	Business application	Customer Management;	Enhancement		3GL	iOS	IFPUG 4+	68	S
10401	B	A	2019	Communication	Telecommunications;	Business Application	EAI/ESB;	Enhancement		4GL	.NET	IFPUG 4+	99	S
10539	B	A	2021	Communication	Telecommunications;	Business application	Integration;	Enhancement		4GL	Amdocs framework	IFPUG 4+	56	S
10586	B	A	2020	Retail		Business application	Document management;	Enhancement		3GL	Java	Nesma	1224	L
10631	B	A	2021	Manufacturing	Automotive;	Business Application	Unknown;	New Development		3GL	Java	COSMIC	318	M2
10699	B	A	2020	Communication	Telecommunications;	Business application	Customer Management;	Enhancement			Android	IFPUG 4+	138	M1
10743	B	A	2019	Communication	Telecommunications;	Business Application	Other;	Enhancement		4GL	ABAP 4	IFPUG 4+	89	S
10746	B	A	2021	Communication	Telecommunications;	Business application	Other;	Enhancement			Unknown	IFPUG 4+	73	S
10766	B	A	2020	Communication	Telecommunications;	Business Application	Integration;	Enhancement			API Connect	IFPUG 4+	171	M1
10804	B	A	2021	Manufacturing	Automotive;	Business Application	Unknown;	New Development		3GL	Java	COSMIC	161	M1
10840	B	A	2019	Finance		Business Application	SAP ERP;	Enhancement		4GL	ABAP	NESMA	434	M2
10887	B	A	2021	Communication	Telecommunications;	Business application	Integration;	Enhancement		4GL	Amdocs framework	IFPUG 4+	265	M1
10926	B	A	2020	Government		Business Application	Transaction Processing;	Enhancement		4GL	Oracle	NESMA	2.407	L
10933	B	A	2019	Services		Business application	Multimedia;	Enhancement		5GL	Dutsystems	Nesma	1512	L
10948	B	A	2020	Government		Business application	Customer relationship management;	Enhancement		4GL	Oracle	Nesma	150	M1
11145	B	A	2020	Communication	Telecommunications;	Business Application	Other: Service Order & Activation Manager	Enhancement		3GL	Java	IFPUG 4+	322	M2
11165	B	A	2019	Agriculture, Forestry and Fishing		Business Application	Business Analysis Tool;	Enhancement		4GL	Oracle	NESMA	1.139	L
11171	B	A	2020	Communication	Telecommunications;	Business Application	Customer relationship management;	Enhancement		4GL	Amdocs framework	IFPUG 4+	58	S
11178	B	A	2021	Construction		Business application	Database Application;	Enhancement		4GL	Oracle	Nesma	168	M1
11266	B	B	2019	Finance		Business Application	Database System;	Enhancement		3GL	Java	NESMA	413	M2
11269	B	A	2021	Communication	Telecommunications;	Business application	Other: Integration;	Enhancement			Unknown	IFPUG 4+	70	S
11334	B	A	2019	Communication	Telecommunications;	Business Application	Other: Online. eSales;	Enhancement		4GL	html / jsp	IFPUG 4+	110	M1
11349	B	A	2020	Communication	Telecommunications;	Business Application	Integration;	Enhancement		3GL	ProC	IFPUG 4+	65	S
11390	B	A	2021	Communication	Telecommunications;	Business application	Other;	Enhancement			Unknown	IFPUG 4+	108	M1
11457	B	B	2019	Utilities		Business Application	Report Generation;	Enhancement		3GL	Java	NESMA	357	M2
11461	B	A	2021	Communication	Telecommunications;	Business application	Other;	Enhancement			Unknown	IFPUG 4+	56	S
11502	B	A	2019	Finance		Business Application	Financial Transactions;	Enhancement		4GL	.Net	NESMA	2.703	L
11513	B	A	2020	Construction		Business Application	Financial Transactions;	Enhancement		4GL	.Net	NESMA	542	M2
11614	B	A	2021	Communication	Telecommunications;	Business application	Integration;	Enhancement		4GL	Amdocs framework	IFPUG 4+	54	S

Power users – filter to select a dataset

ISBSG Project ID	Rating Data Quality Rating	Rating UFP Rating	Software Age Year of Project	Software Age Year Range	Major Grouping Industry Sector	Major Grouping Organisation Type	Major Grouping Application Group	Major Grouping Application Type	Major Grouping Application Type Grouping	Major Grouping Development Type	Major Grouping Development Platform	Major Grouping Language Type	Major Grouping Primary Programming Language	Major Grouping Count Approach
10048	B	A	2018	2016-2020	Construction		Business Application	Financial Transactions;	Financial transaction process/accountin	Enhancement		3GL	Java	NESMA
10335	B	B	2018	2016-2020	Services		Business Application	Business Intelligence;	Business Application	Enhancement		3GL	Java	NESMA
10586	B	A	2020	2016-2020	Retail		Business application	Document management;	Document Management	Enhancement		3GL	Java	Nesma
10638	B	B	2017	2016-2020	Manufacturing		Business Application	Document management;	Document Management	Enhancement		3GL	Java	NESMA
10784	B	B	2018	2016-2020	Mining		Business Application	Logistics;	Logistics Management	Enhancement		3GL	Java	NESMA
11058	B	B	2018	2016-2020	Manufacturing		Business Application	Business Intelligence;	Business Application	Enhancement		3GL	Java	NESMA
11266	B	B	2019	2016-2020	Finance		Business Application	Database System;	Data Management	Enhancement		3GL	Java	NESMA
11457	B	B	2019	2016-2020	Utilities		Business Application	Report Generation;	Reporting	Enhancement		3GL	Java	NESMA
11542	B	B	2018	2016-2020	Manufacturing		Business Application	Logistics;	Logistics Management	Enhancement		3GL	Java	NESMA
12014	B	A	2019	2016-2020	Government		Business Application	Financial Transactions;	Financial transaction process/accountin	Enhancement		3GL	Java	NESMA
12083	B	B	2018	2016-2020	Wholesale		Business Application	Transaction Processing;	Transaction Processing	Enhancement		3GL	Java	NESMA
12414	B	A	2020	2016-2020	Construction		Business application	Transaction Processing;	Transaction Processing	Enhancement		3GL	Java	Nesma
12661	B	A	2020	2016-2020	Finance		Business Application	Expert System;	Expert System	Enhancement		3GL	Java	NESMA
12849	B	B	2017	2016-2020	Utilities		Business Application	Customer relationship management;	CRM	Enhancement		3GL	Java	NESMA
12954	B	B	2019	2016-2020	Retail		Business Application	Document management;	Document Management	Enhancement		3GL	Java	NESMA
13056	B	B	2018	2016-2020	Utilities		Business Application	Business Intelligence;	Business Application	Enhancement		3GL	Java	NESMA
13121	B	B	2019	2016-2020	Manufacturing		Business Application	Computer aided design;	Computer aided design	Enhancement		3GL	Java	NESMA
13382	B	B	2017	2016-2020	Wholesale		Business Application	Business Analysis Tool;	Business Application	Enhancement		3GL	Java	NESMA
13451	B	A	2019	2016-2020	Government		Business Application	Financial Transactions;	Financial transaction process/accountin	Enhancement		3GL	Java	NESMA
13703	B	B	2017	2016-2020	Government		Business Application	Computer aided design;	Computer aided design	Enhancement		3GL	Java	NESMA

Metric	Delivery Speed
N	283
Min	15
P10	47
P20	63
P25	69
P30	76
P40	94
Median	112
P60	128
P70	151
P75	160
P80	168
P90	192
Max	214
Avg	115



ISBSG Productivity Query Tool (PDQ)

Step 1 – Enter the filters for your project.

FILTERS			
Functional Size (function points)	Development type	Year	Count Standard
500-1000	Match All	last 5 year	FP

Project Attributes	Project Delivery Rate				Speed of Delivery				Defect Density			
	Matches	1st Quartile	Median	3rd Quartile	Matches	1st Quartile	Median	3rd Quartile	Matches	1st Quartile	Median	3rd Quartile
Primary Programming language Java	78	4.35	7.60	10.68	76	142.05	98.80	65.28	17	57.30	6.90	4.90
Organisation Type Government	38	6.53	9.60	14.53	37	78.70	49.50	38.90	23	38.00	16.70	10.25
Application Type												
Maximum Team Size												
Web Development												
Count Approach IFPUG 4+	483	4.00	7.70	15.80	415	137.58	87.75	56.33	76	39.33	14.90	5.18

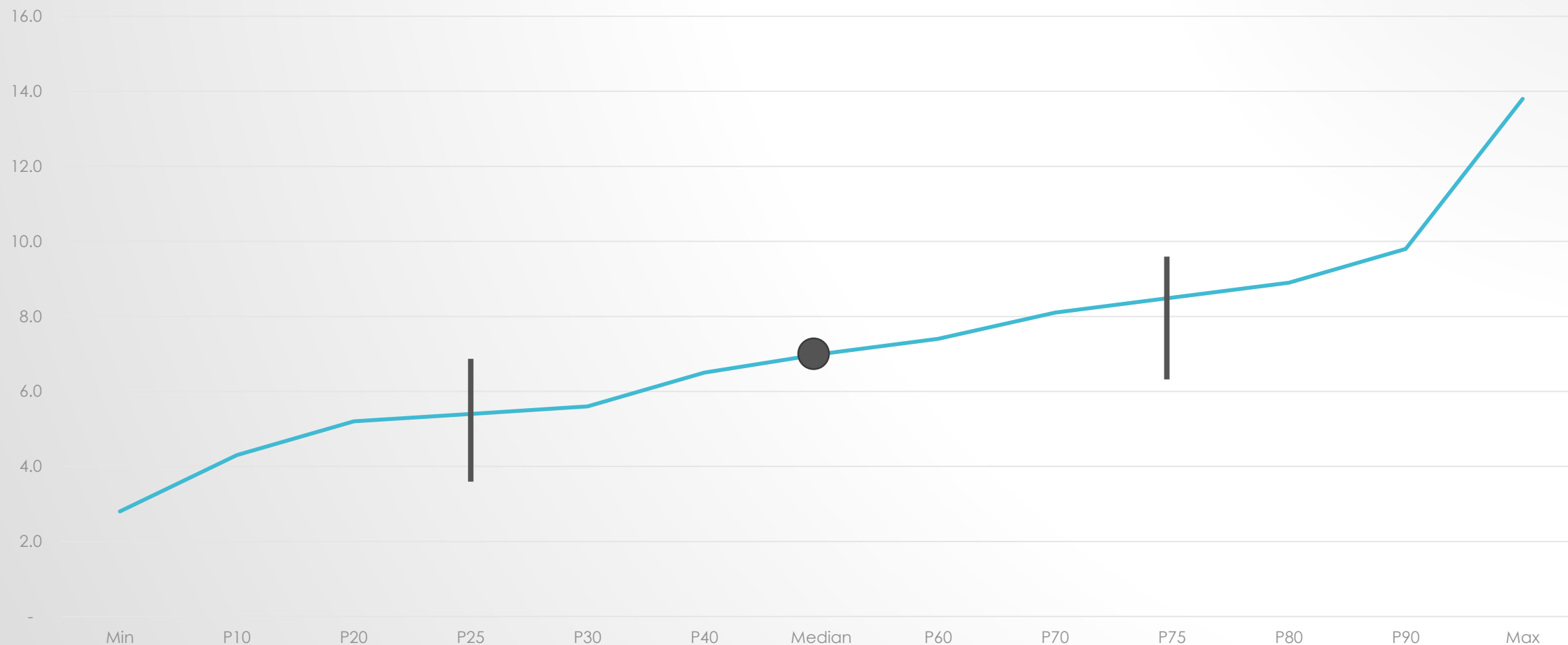
Step 3 – Enter your Function Point count and click Estimate. The projects selected for the result will contain ALL the attributes selected. Select wisely as selecting too many attributes may limit the amount of data to be included in your result.

Functional size (function points)	800	Estimate		
Estimates	Project Delivery Rate	Project Work Effort	Speed of Delivery	Project Duration
	Matched	8	Matched	8
Level 1 Dev Team	(hours per function point)	(Hours)	Function points per month	(months)
1st Quartile	3.58	2864.00	161.25	4.96
Median	7.50	6000.00	74.85	10.69
3rd Quartile	9.80	7840.00	58.80	13.61

ISBSG Data Version: 3.1

Analyze the data distribution

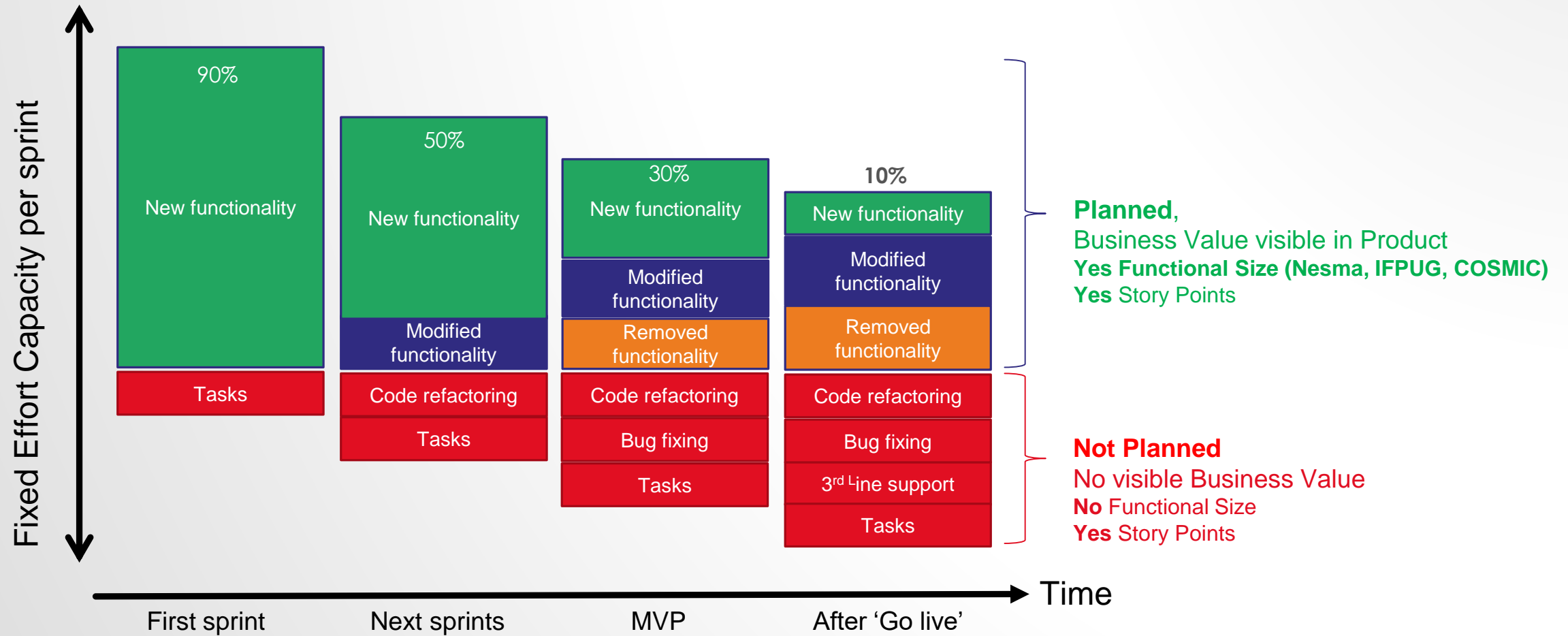
Project Delivery Rate (hours/FP)



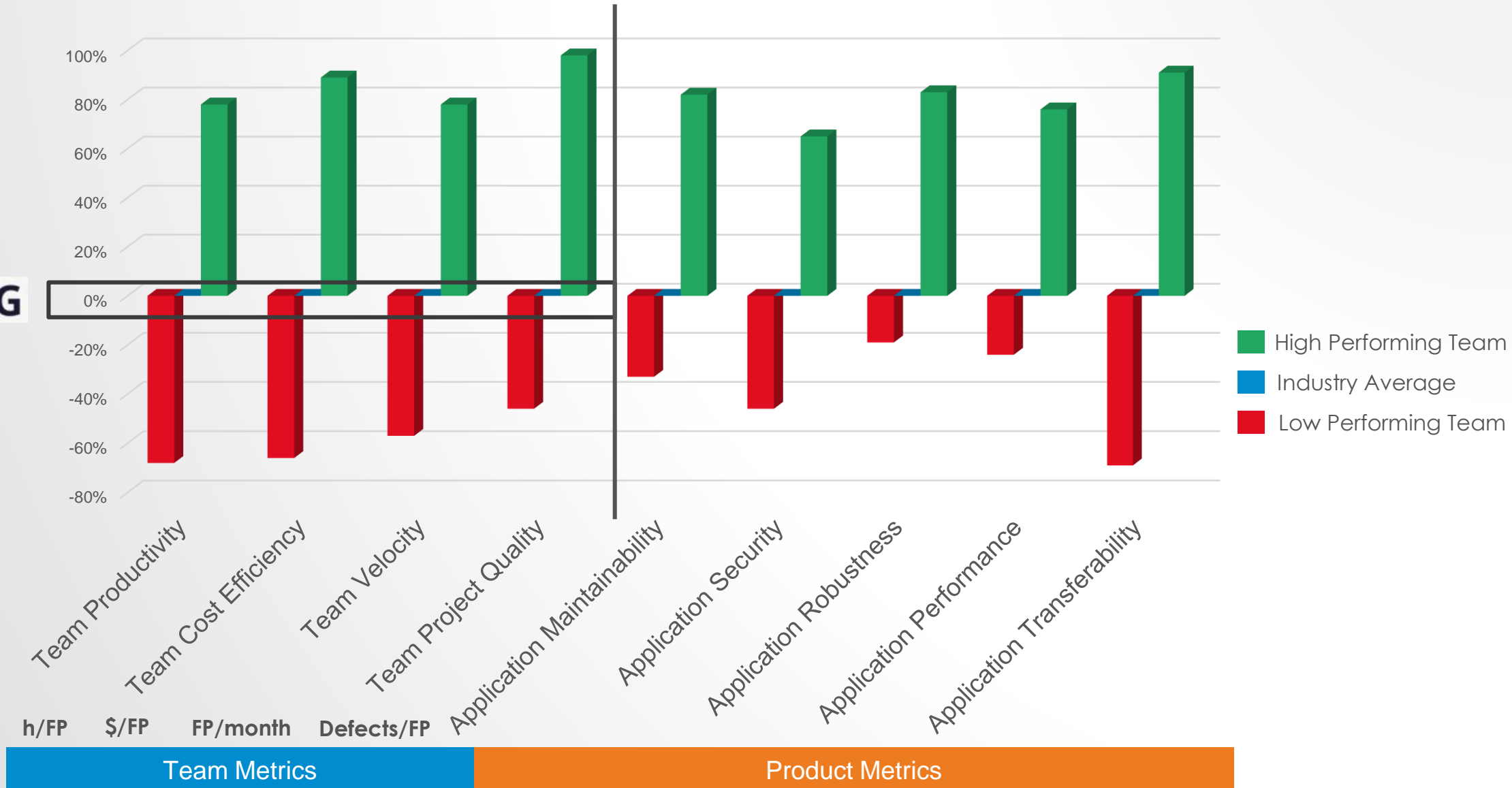


Practical case: Agile Value Management

Managing Agile Value Creation



High and low performing teams

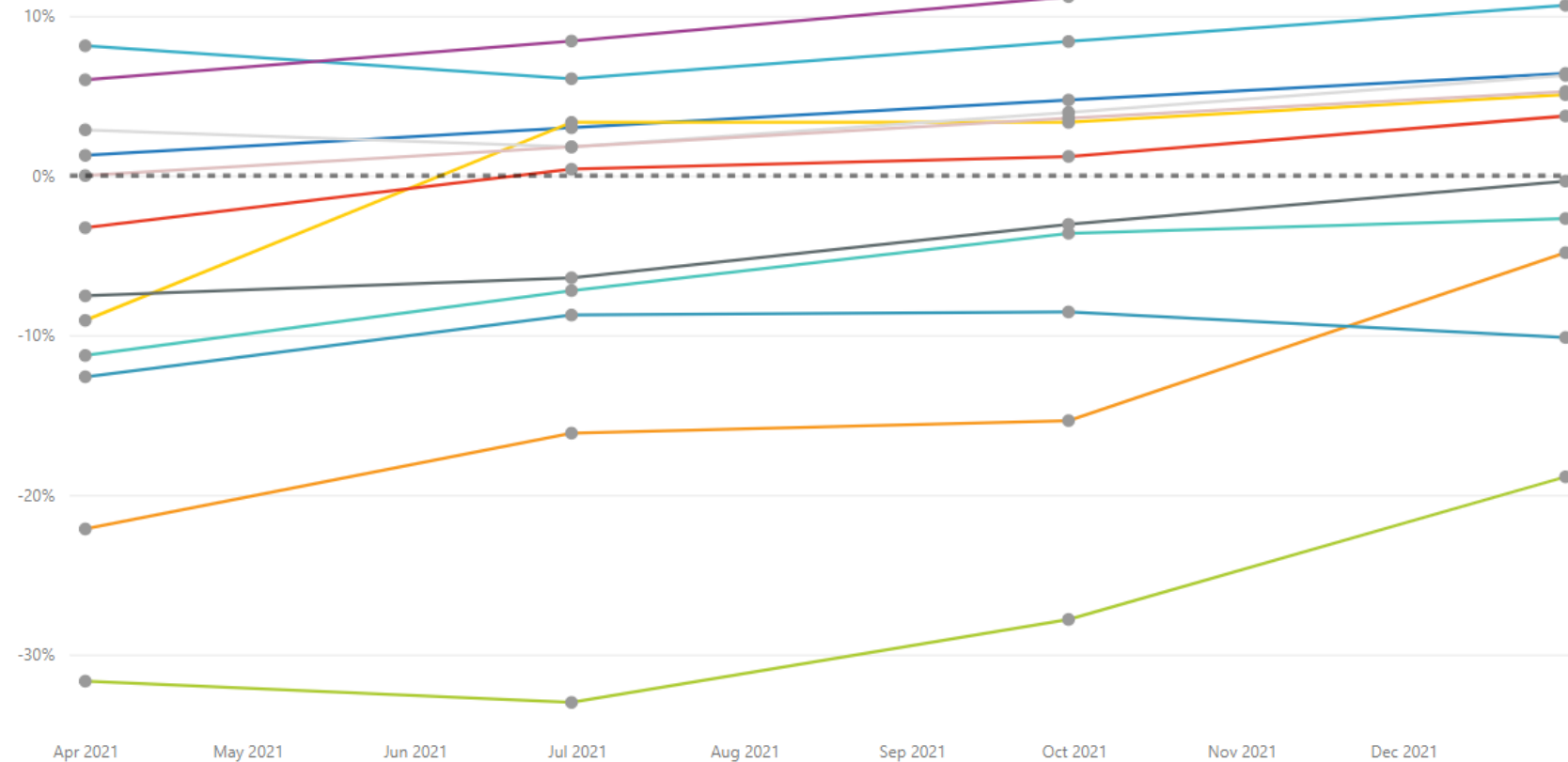


Understanding high and low performing teams

Team benchmark

How does the selected teams perform in comparison with each other on Productivity Index?

Team name ● demoteam1 ● demoteam10 ● demoteam11 ● demoteam12 ● demoteam2 ● demoteam3 ● demoteam4 ● demoteam5 ● demoteam6 ● demoteam7 ● demoteam8 ● demoteam9



Team

All

Productivity Index

Cost Index

Speed Index

Process Index

Value Index

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Portfolio

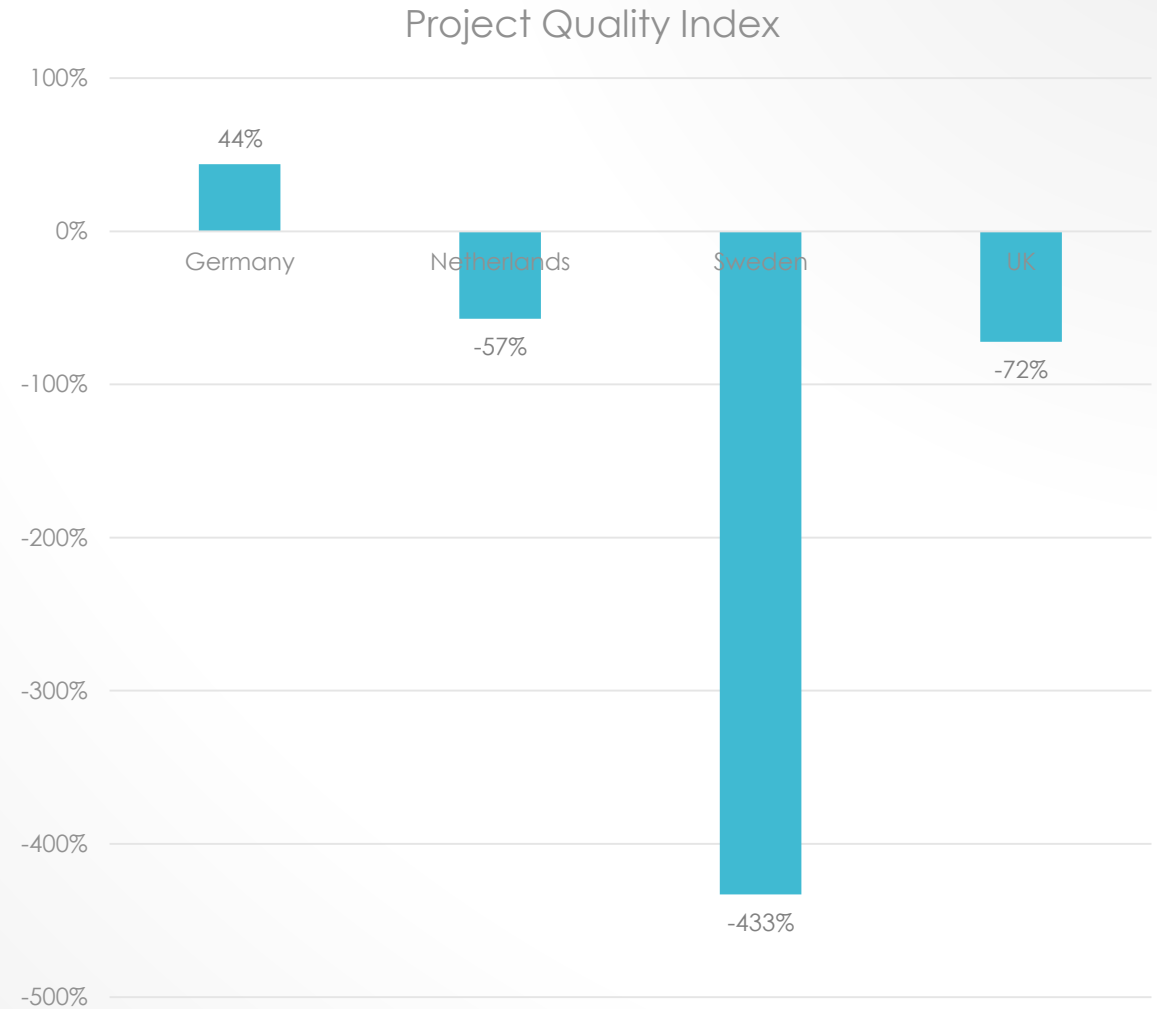
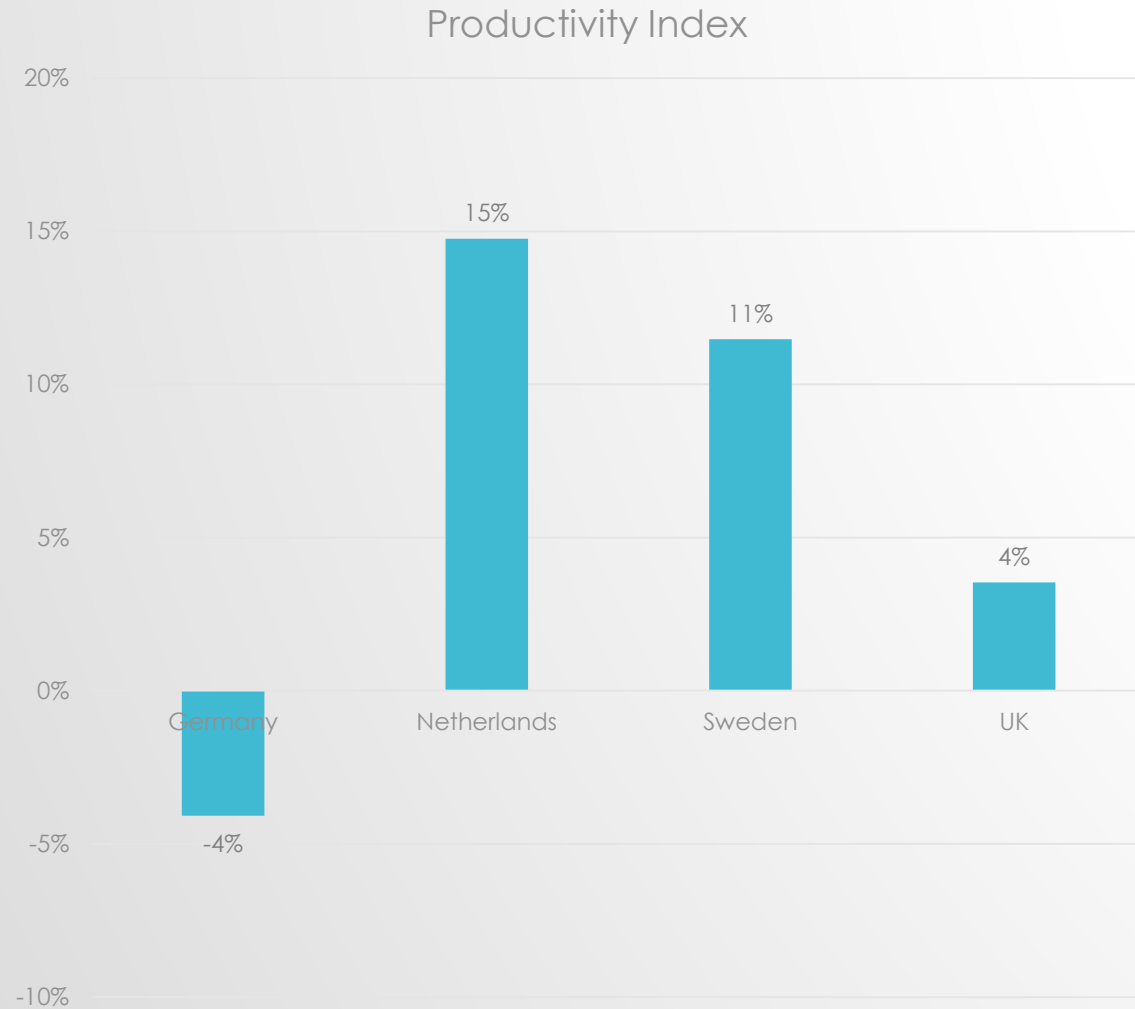
Application health

Team performance

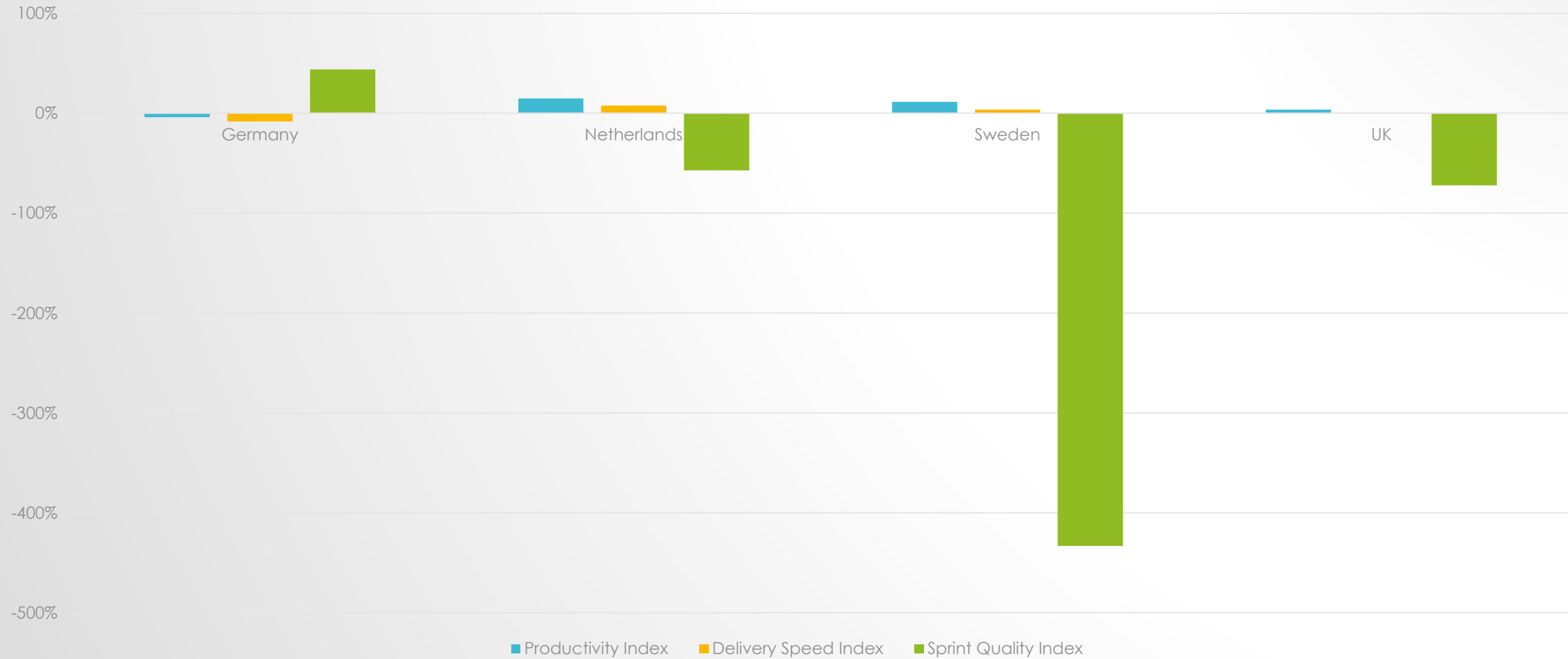
Team benchmark

Glossary

4 similar teams in different countries



Team Performance





Practical case: Software Cost Estimation

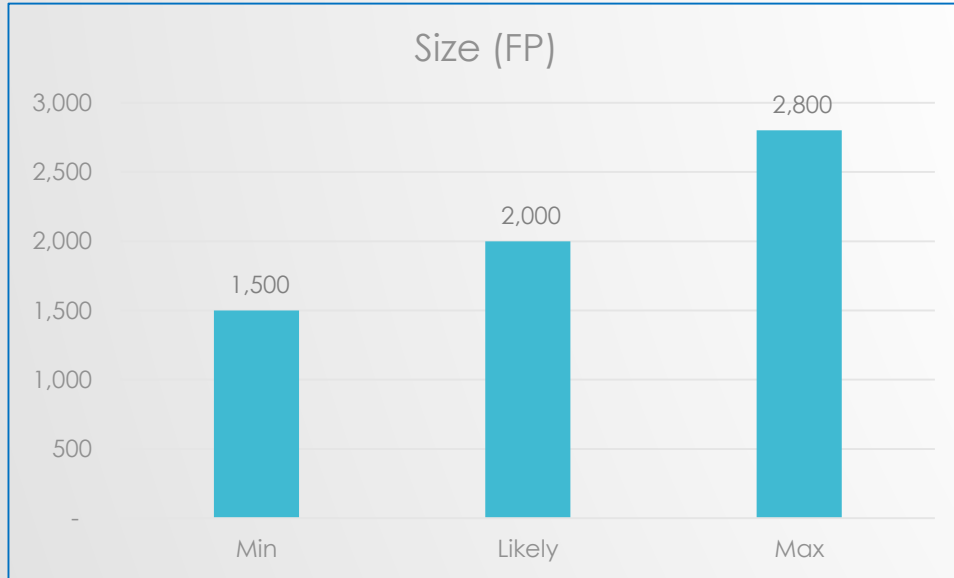
Cost Estimation of a redevelopment project

- The current project administration application of a Construction company is over 15 years old and seen as 'un-maintainable'.
- A redevelopment project is starting: modern architecture, cloud-based, Microsoft .Net technology.
- High-level Design documentation is ready.
- An external supplier is hired to carry out the project.
- This supplier has made its 'expert judgment' estimation based on the number of expected sprints.
- IDC Metri asked to do an objective third-party cost estimation.

Way of working:

1. Determine the Nesma functional size (min, likely, max) based on High Level Design.
2. Determine the Project Delivery Rate and Delivery Speed (min, likely, max) using (ISBSG) data.
3. Calculate the effort hours and duration.
4. Using the vendor rates per hour, and activity breakdown (ISBSG), the cost is calculated.

Cost Estimation of a redevelopment project

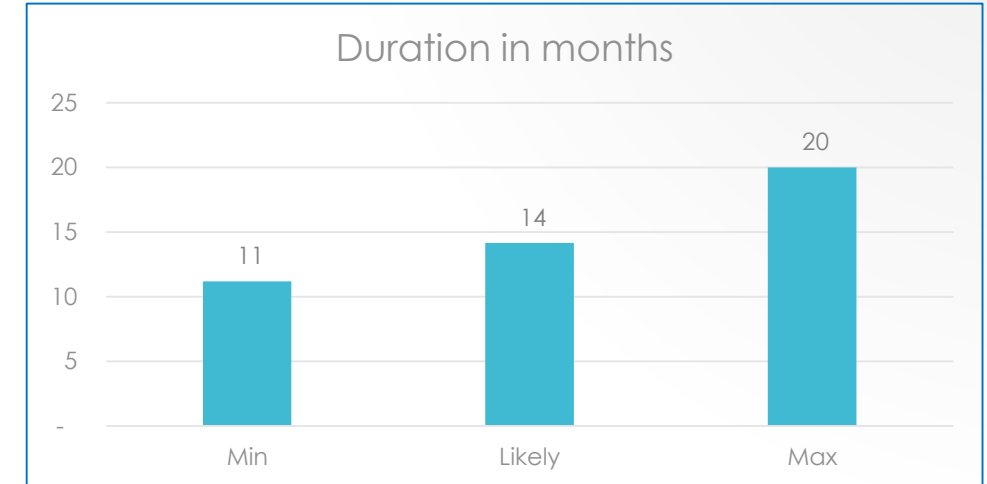


Nesma estimated FP: application size to redevelop

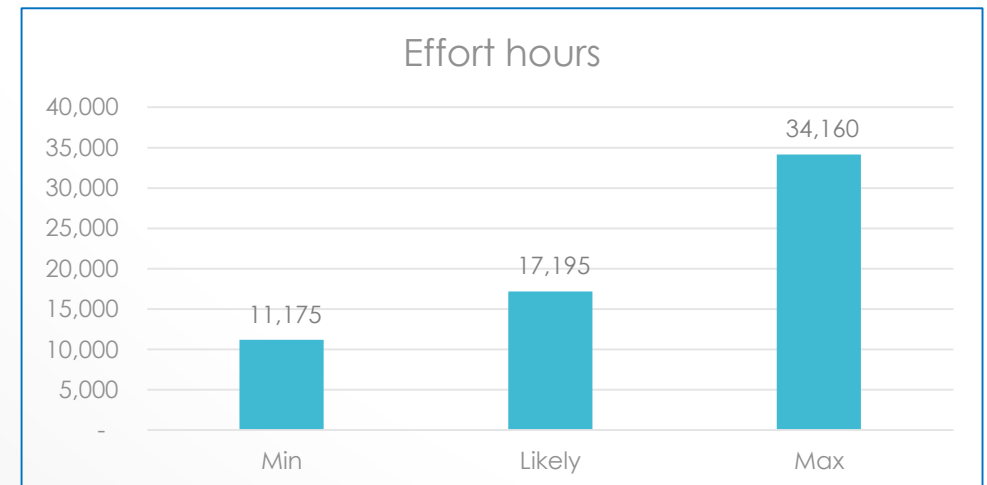


PDR (h/FP)	Min	Likely	Max
Front End (angular)	9,1	9,6	13,3
Back End (.Net)	6,1	7,8	11,3
	7,5	8,6	12,2

Delivery Speed	Likely
FP/month	140



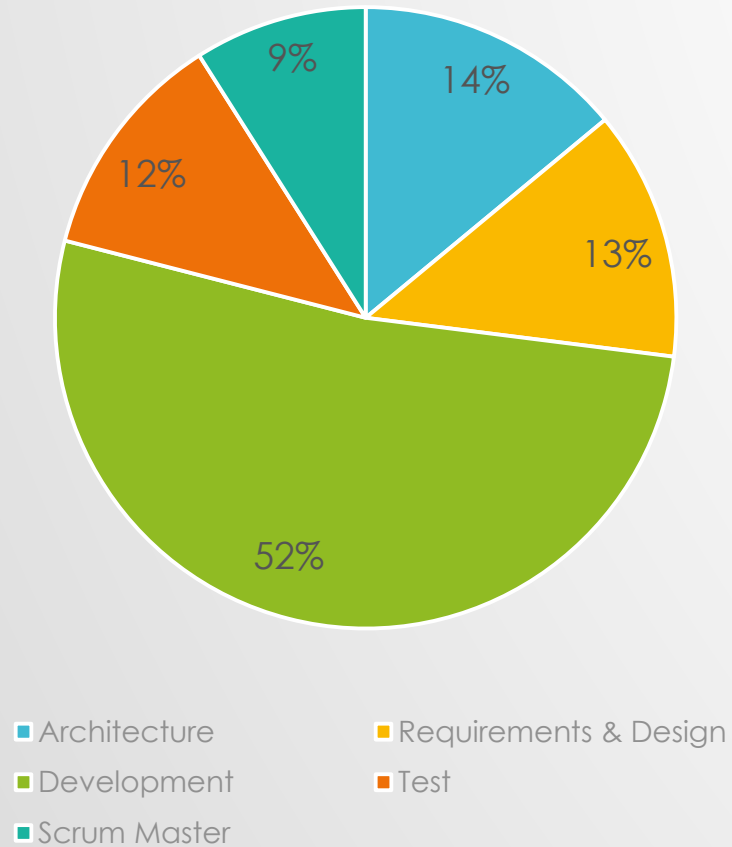
Estimated duration based on ISBSG Speed of Delivery



Estimated effort hours based on ISBSG PDR

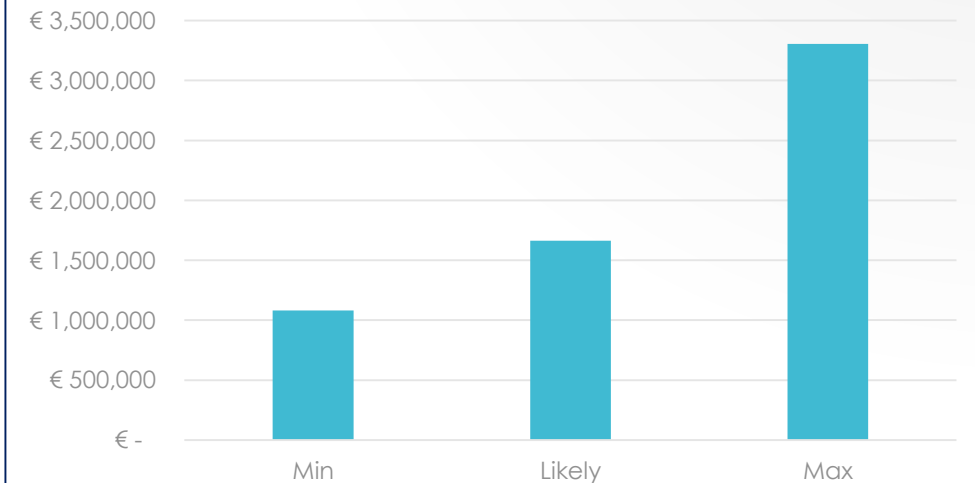
Cost Estimation of a redevelopment project

% activities

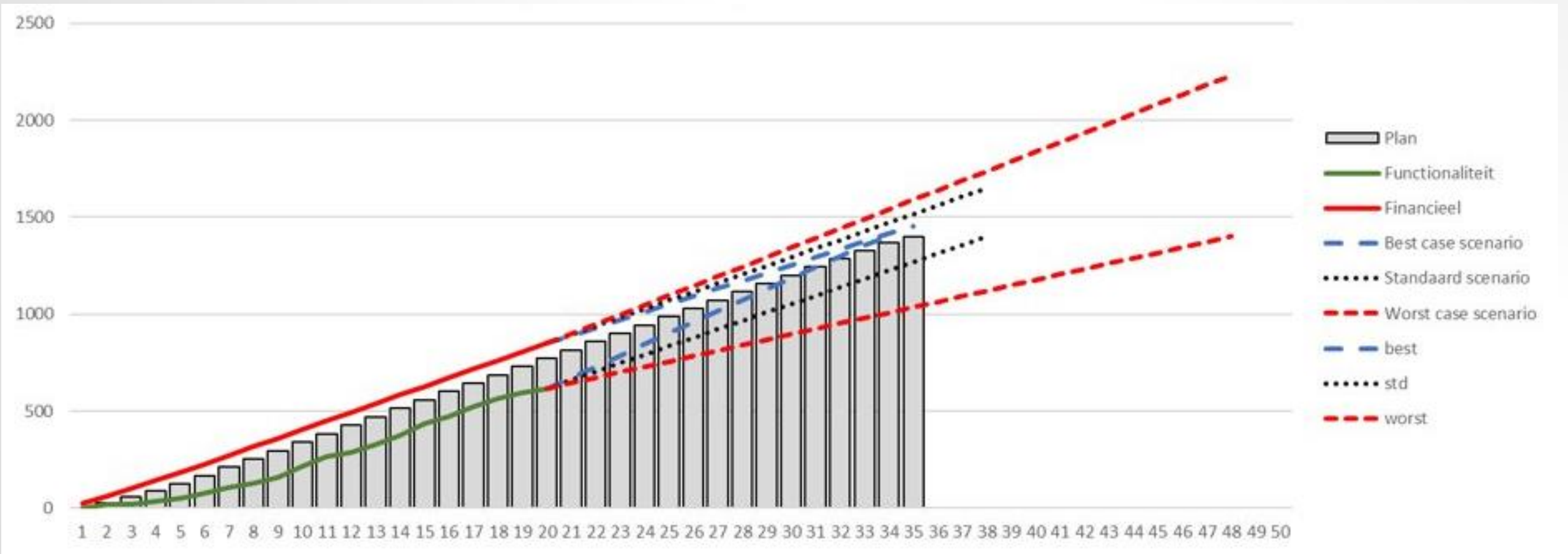


Function/Role	Rate
UX/Visual Design	€ 115
Solution Arch	€ 125
Cloud/SW Arch	€ 130
Backend dev	€ 80
Frontend dev	€ 80
Devops Eng	€ 115
Tester	€ 100
Scrum Master	€ 95

Cost



MONITOR PROGRESS AND UPDATE ESTIMATE BASED ON DATA





Practical cases: Output-based contracting

Contracting Agile AD teams in the industry

The Industry: T&M contracts for AD functions and AD teams

- Rate cards / Blended rates – These are **input-based!**
- No guarantee regarding **productivity and quality!**
- More effort hours spent = higher invoice!

Therefore, there is a trend towards output-based contracts.

However, in practice this is considered difficult, as you need a standardized unit of measurement to measure the output (value) produced.

→ Function Points

- Output-based contracts can be based on Price/FP.
- This benefits the supplier as higher productivity results in higher margin. And more functionality (changes) result in higher invoices.
- The customer also benefits, because of faster delivery and better quality (quality KPIs must be part of the contract).
- There are organizations in the industry that have very good experiences with this type of contracting. But how to determine a fair Price per function point?

Role	Onshore (Netherlands)
Project manager senior	€ 144,00
Project manager medior	€ 133,00
Project manager junior	€ 98,00
Developer senior	€ 122,00
Developer medior	€ 111,00
Developer junior	€ 100,00
Architect senior	€ 133,00
Architect medior	€ 116,00
Scrum Master senior	€ 139,00
Scrum Master medior	€ 116,00
Scrum Master junior	€ 100,00
Project Leader senior	€ 144,00
Project Leader medior	€ 133,00
Project Leader junior	€ 98,00
Solution Architect senior	€ 133,00
Solution Architect medior	€ 116,00
Solution Architect junior	€ 97,55
Solution Engineer senior	€ 98,00
Solution Engineer medior	€ 103,00
Solution Engineer junior	€ 103,00

Example rate card

Determine the Price per FP

The Price per function point is calculated by:

- PDR (hours per FP).
- Blended rate (avg. hourly rate).

It's likely the price per FP varies per team, as for instance the programming language and team size have an impact on PDR.

ISBSG data can be used to determine the market average PDR that a supplier should be able to achieve.

Case: ISBSG is used to determine the PDR for an output-based Price/FP contract. In this case the PDR and the blended rate needed to be given both for low complexity, average complexity and high complexity changes. The blended rate was 100 EUR per hour.

The company used the table on the right:

Low complexity: P25 PDR = 12,2 hours/FP	* 100 EUR	= 1220 EUR/FP
Medium complexity: Median PDR = 14,8 hours/FP	* 100 EUR	= 1480 EUR/FP
High complexity: P75 PDR = 19,9 hours/FP	* 100 EUR	= 1990 EUR/FP

Percentile	PDR (ISBSG)
P10	7,6
P25	12,2
Median	14,8
P75	19,9
P90	24,8




To conclude this presentation


The ISBSG board and Gold partners

<https://www.isbsg.org/board/>

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How to get the data?

Support ISBSG's aim in bringing certainty to software project planning

Achieve improved outcomes for your project with ISBSG data, reports or the productivity tool.

See an [overview](#) of ISBSG subscription choices.

	Corporate Subscription \$7500 (AUD) for 1-9 users \$10000 (AUD) for 10+ users yearly	Data Subscription \$3000 (AUD) for 1 user yearly	Productivity Data Query Tool Subscription \$15 (AUD) monthly or \$150 (AUD) yearly	Report Pack \$250 (AUD)
Development & Enhancement project data - 12 month license	✓	✓		
Maintenance & Support project data - 12 month license	✓	✓		
Project data updates	✓			
All ISBSG reports	✓			✓
A customized report on your chosen topic	✓			
12-month subscription to Productivity Data Query Tool	✓		✓	
	Learn more	Find out more	Learn more	Find out more

Or first become member of **Nesma** and get large discounts on the data and access to all ISBSG Analysis reports

<https://nesma.org/members/registration-form/>



10 KEY TAKE AWAYS

1. **ISBSG** is an international not-for-profit organization that collects data of completed projects.
2. **Nesma** is an international not-for-profit organization that focusses on sizing (ISO standard) and software cost estimation.
3. Functional Size Measurement is a crucial first step in many fact-based decision-making activities: cost estimation, team performance measurement, benchmarking, etc. **using size and data!**
4. The ISBSG data is (mainly) based on **functional size: Nesma/IFPUG/COSMIC FP**.
5. The data is provided in **Excel sheets** (for Power users) or can be accessed via the online **Productivity Query Tool (PDQ)**.
6. There are objective (Agile) team metrics that can be compared to industry averages: Project Delivery Rate (hours/FP), Cost Efficiency (Cost/FP), Delivery Speed (FP/Month), Project Quality (Defects/1000FP).
7. Monitoring agile projects using functional size is important, as story point metrics are misleading.
8. Functional Size Measurement creates **reference points** which are used to monitor and are input for the recalibration of an estimate.
9. ISBSG data can be used to determine a realistic price per function point in case of **output-based contracting**.
10. If you wish to obtain the data, consider to become Nesma member (or another Gold partner member) to save on the price!

THANK YOU!



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Nesma:

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