

Hail Caesar!

For those about to governance their IT
(we salute you)

IT Confidence

Oct '21

ANDRÉS GUTIÉRREZ

Senior Consultant **leda**mc



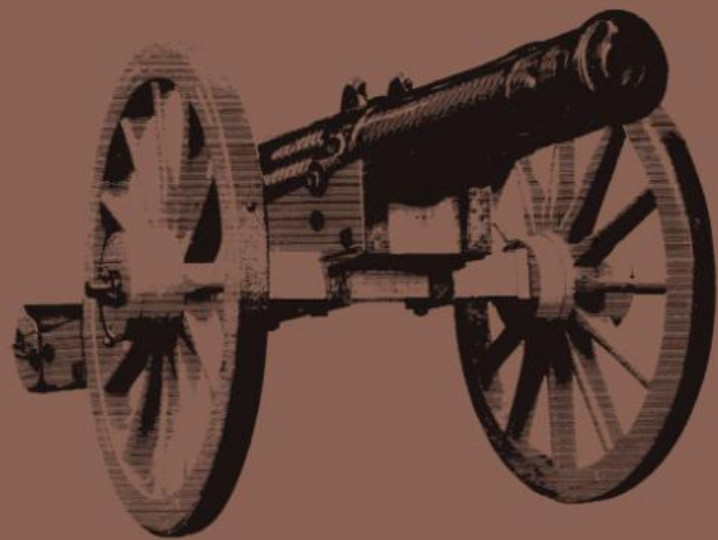
A 19 years experience professional as a **Software Engineer & Development Specialist, Master in Big Data, Professional Scrum Master I (PSM I) and Certified Function Points Specialist (CFPS)** since 2012; but **Function Points enthusiast** since 2006, using them in Retail, Telco, Banking, Government.....

.....in the rare moments of leisure, **a science fiction writer.**



Ethan Coen & Joel Coen (2016)

AC/DC



FOR THOSE ABOUT TO ROCK

ROME





Hail Caesar!

—

Caesar

Zar

(Russian)

Car

(Belarusian)

Kaiser

(German)

Keizer

(Dutch)

Keiser

(Norwegian)

Kejsare

(Swedish)

Tsar

(Ukrainian)





JAPAN

AROUND 1950...

Toyota Production System

Whole Toyota Motor Company

2.685 in 13 years



TOYOTA

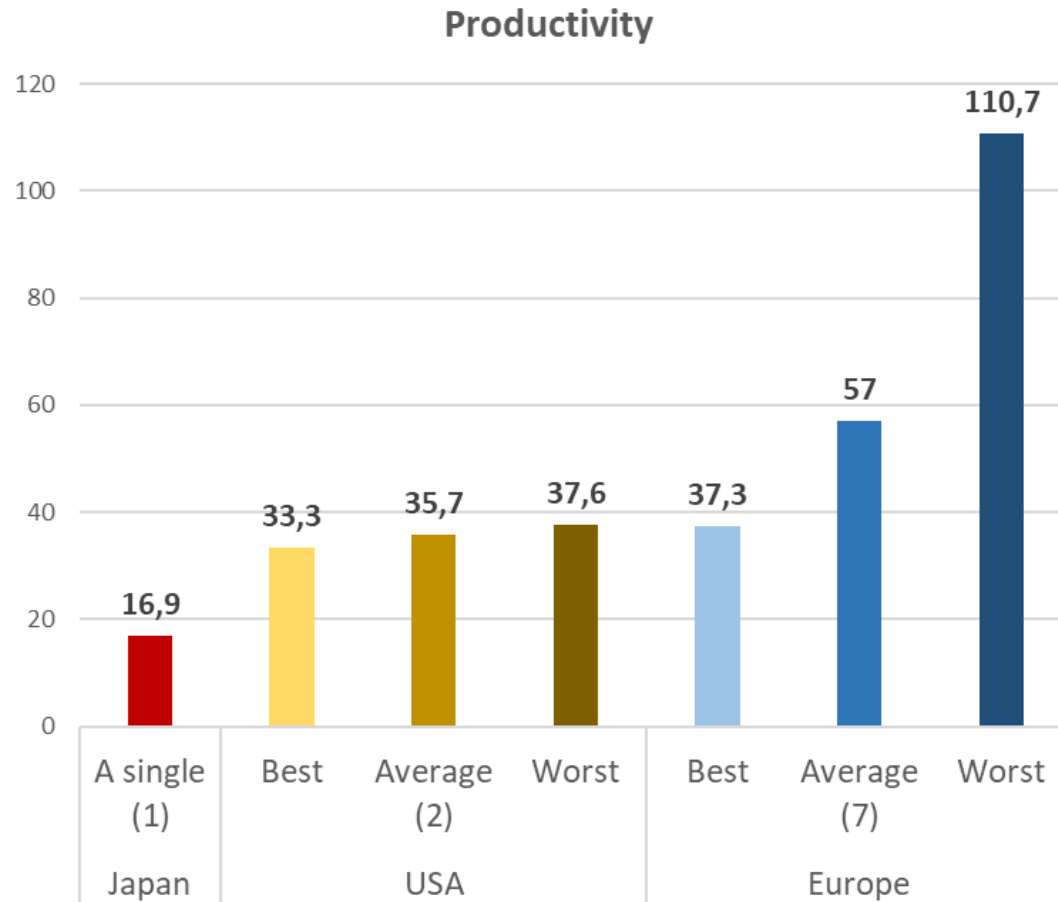
The Ford Rouge plant in Detroit

7.000 per day



30 YEARS LATER... PRODUCTIVITY

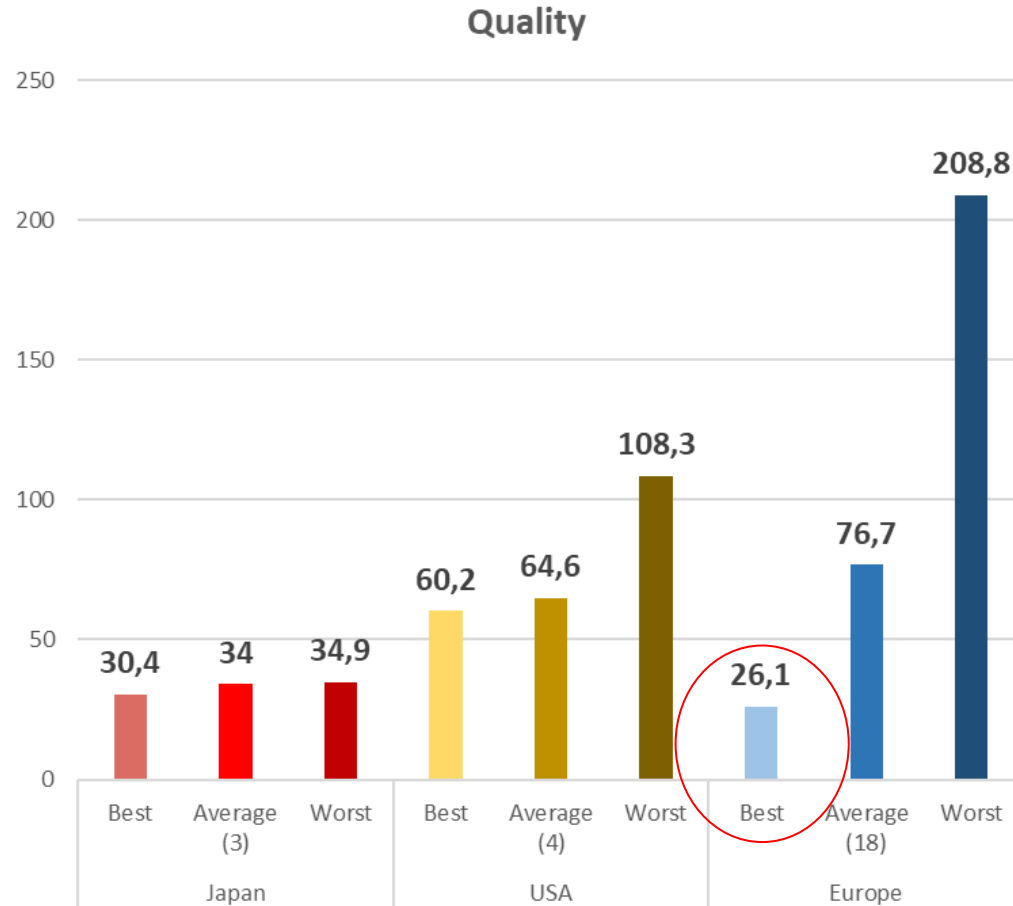
Lean Manufacturing



Study of luxury vehicle production plants in Japan, the United States and Europe in 1989.

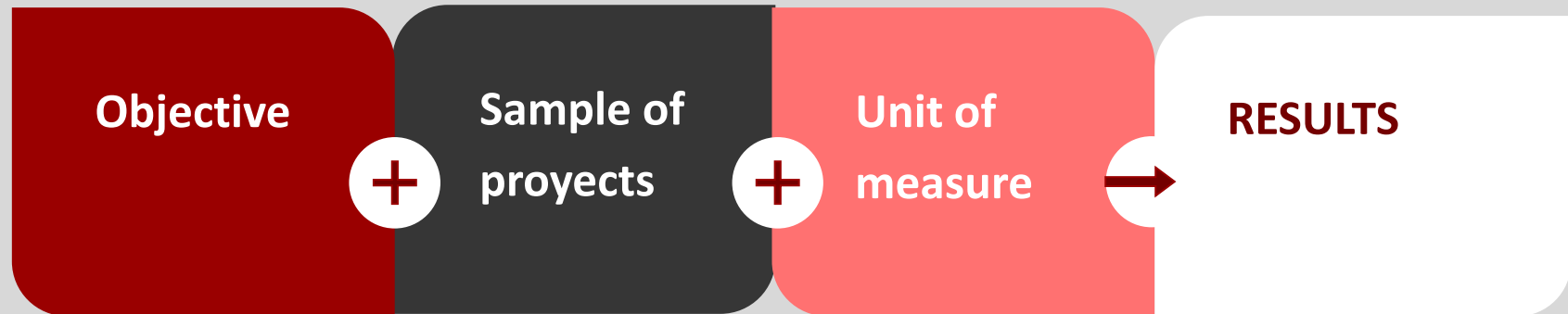
30 YEARS LATER... QUALITY

Lean Manufacturing



Study of luxury vehicle production plants in Japan, the United States and Europe in 1989.

BENCHMARKING



OBJECTIVE

- ✓ Knowing our situation
- ✓ To know the situation of a supplier
- ✓ To know our situation with respect to the market
- ✓ To know the impact of digital transformation
- ✓ Check our evolution over time
- ✓ ...

SAMPLE OF PROJECTS

- ✓ Similar technologies.
- ✓ Representative number of projects.
- ✓ Similar characteristics: size in hours, nature, etc.
- ✓ Representative of the organization.
- ✓ Effort composed of the same tasks (development life cycle, E2E, etc.).
- ✓ ...

UNIT OF MEASURE

- ✓ Software product as standardization and comparison unit
- ✓ Unit related to the objective: Effort, Quality, etc.



MADRID



Case 1: Customer 1

RETAIL

Case 1: Customer 1 | RETAIL

Objective

Analyze and compare with market references the productivity of software development of JAVA, COBOL, SAP and C/C++ technologies of CLIENT RETAIL, in one of its main IT service providers.



Sample of projects

The total number of projects selected was 143 and 63 were finally measured, distributed as follows:

- ✓ Cobol: 17
- ✓ Java: 14
- ✓ SAP: 16
- ✓ C/C++: 16

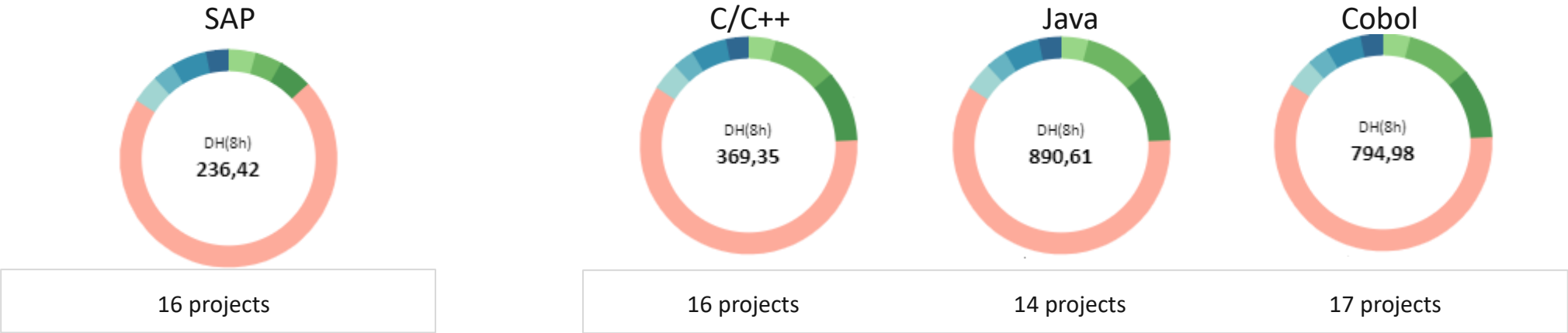


Unit of measure

IFP = Impacted Function Points (IFPUG/NESMA)

Case 1: Customer 1 | RETAIL

For the productivity analysis, we will consider the effort of all the activities of the evolutionary life cycle carried out by the suppliers and **Customer 1_ Retail**. For this study, the actual effort consists of the following activities:



Monitoring and control	4,20%	■
Requirements Engineering	4,00%	■
Architecture	5,00%	■
Construction	70,90%	■
Quality	4,20%	■
Platform assurance	3,20%	■
System and Acceptance Testing	5,30%	■
Transition	3,20%	■

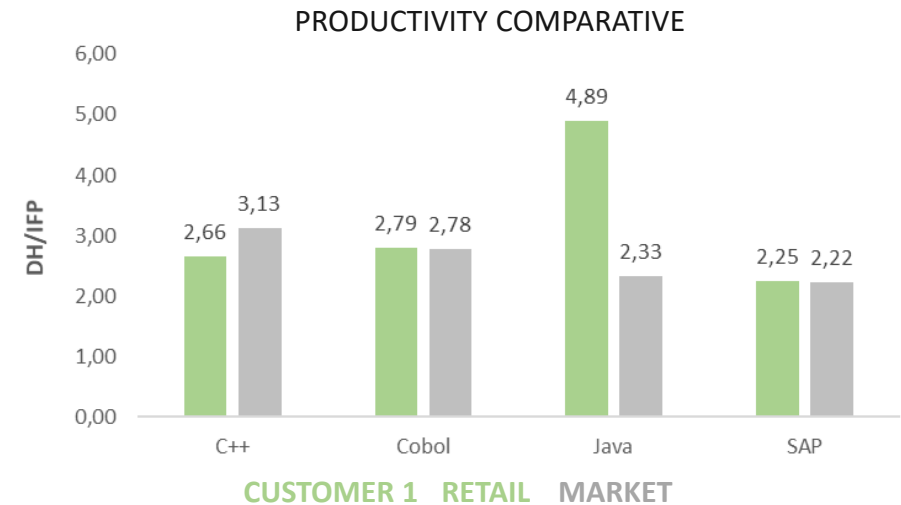
Monitoring and control	4,20%	■
Requirements Engineering	9,60%	■
Architecture	10,60%	■
Construction	59,70%	■
Quality	4,20%	■
Platform assurance	3,20%	■
System and Acceptance Testing	5,30%	■
Transition	3,20%	■

Case 1: Customer 1 | RETAIL

The average productivity for the analyzed developments has been compared with the productivity of the **LedaMC** repository.

- ✓ It can be seen that the productivity obtained in the Cobol and SAP projects of **Customer 1_ Retail** is aligned with the market (i.e. the number of days required to develop a functionality is like the market).
- ✓ In Java, **Customer 1_ Retail's** productivity is far away from the market.
- ✓ In C/C++ productivity is higher than the market by almost 18%.

Technology	No. Market measures	Productivity Customer 1_ Retail (MD/IFP)	Productivity Market (MD/IFP)	Difference
C/C++	338	2,66	3,13	17,8 %
Cobol	537	2,79	2,78	- 0,4 %
Java	3.797	4,89	2,33	- 52,35 %
SAP	1.198	2,25	2,22	- 1,3 %



Case 2: Customer 2

BANK

Case 2: Customer 2 | BANK

Objective

Compare the productivity and unit cost of software development of Customer 1_Bank with the market



Sample of projects

- ✓ 56 projects developed in Java/Cobol
- ✓ Average effort of 512 MH per project
- ✓ 1,280 Function points (more than 500 functional processes)
- ✓ 29 kH / 0.9 M€ on 7.2 M€ of evolutionary/standardization



Unit of measure

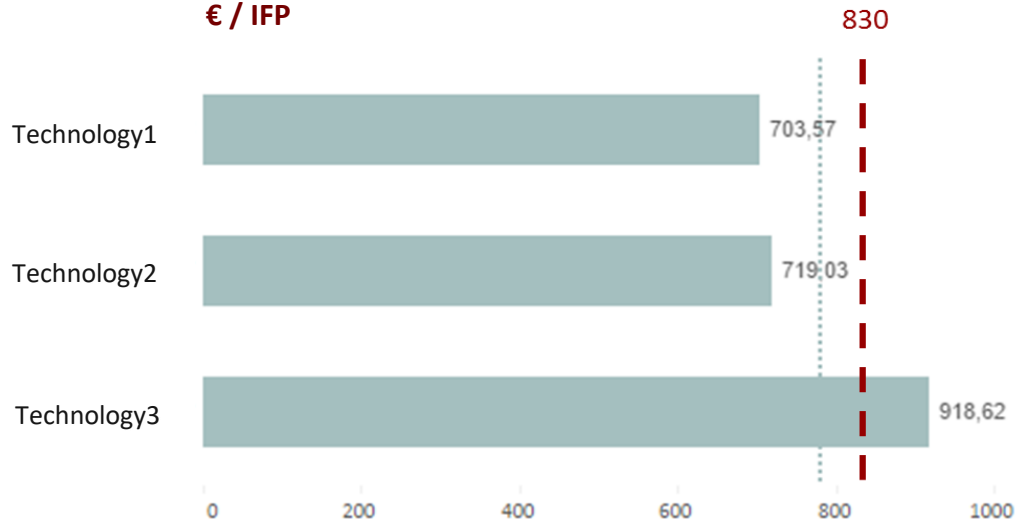
IFP = Impacted Function Points (IFPUG/NESMA)

CASE1: Customer 2 | BANK: Unit cost & productivity

Unit Cost E2E

Total Customer 2_Bank: 738 €/IFP

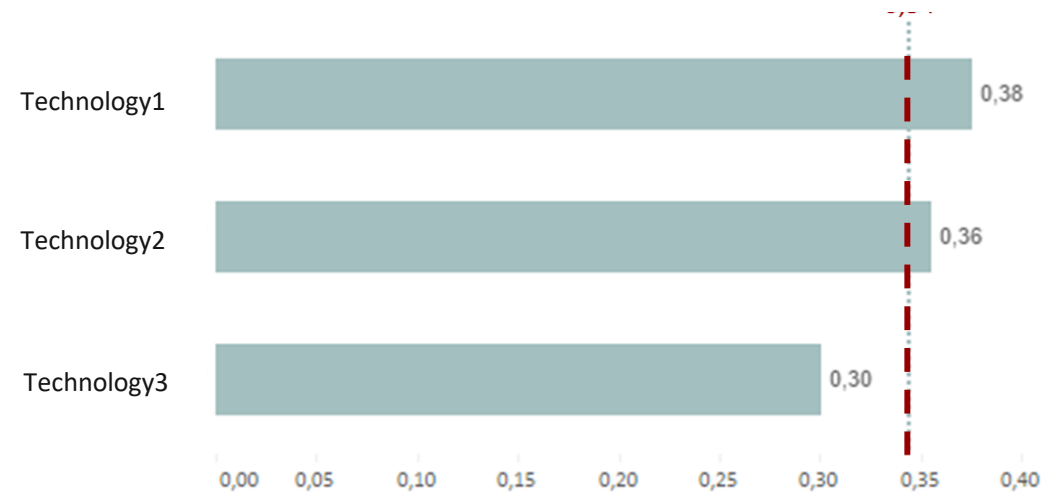
Comparison of unit cost by segment
€/ IFP



Productivity E2E

Total Customer 2_Bank : 0,36 IFP/MD

Comparison of operative productivity by segment
IFP/ MD(8)

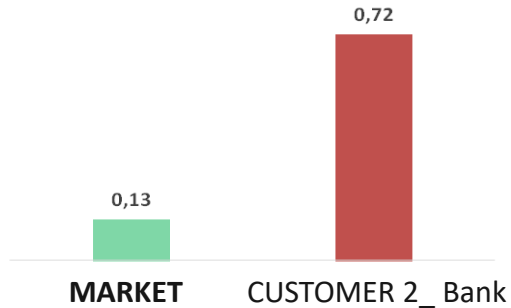


- The unit cost of development projects is lower than average market values.
- But this productivity is not associated with an efficiency in the development time, especially in the final phases of Validation and Implementation:

Average resolution effort of 152 HH of development (1 person month) >> average resolution time of 232 days (8 months).

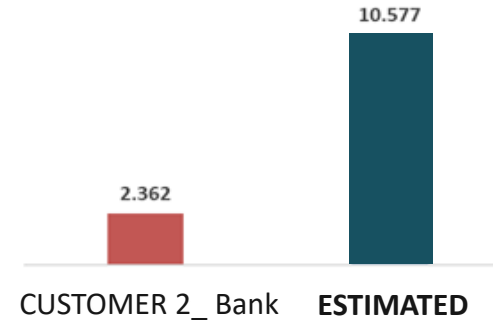
CASE1: Customer 2 | BANK: Test Benchmarking

Test Case Defect Rate
Defects/TC



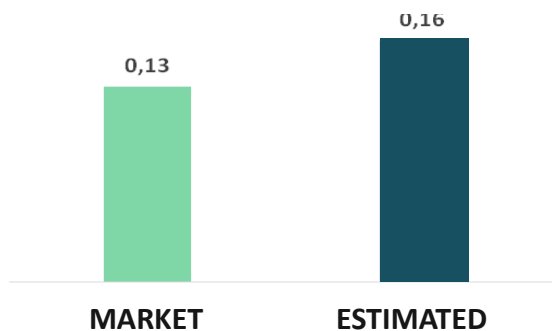
The error rate in the UAT phase is very high, affecting the quality of the products delivered.

TC Difference



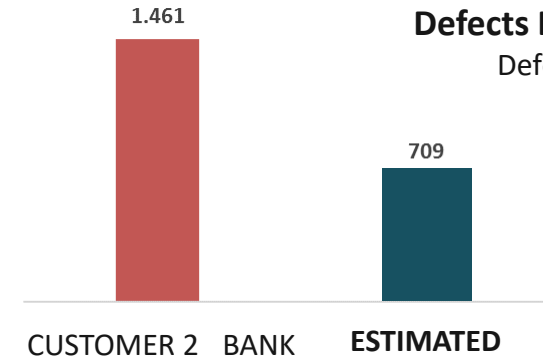
Nearly 5 times more test cases should have been reported.

Test Case Defect Rate
Defects/TC estimated



If all the estimated TCs had been executed, the failure rate would be 23% higher than market.

Defects Detected
Defects



The number of defects detected in user tests is 2 times higher than estimated according to market data.

Hail Caesar!

—

BENCHMARKING

Results vs Market



Why do we
know this?

Because we manage it...

leda_{MC}



Efficiency & Quality Office

We measure the productivity and quality of delivered product,



Efficiency & Quality benchmarking

Thanks to a database with information of more than 65k development projects.



Agile model diagnosis

Agile development models are the most appropriate to align business needs with IT.



Agile digital transformation

Guide in the digital transformation process using objective metrics that measure the agile team's performance; the team as an instrument of value.



Quality governance

You will be able to use the quality management methods that we have been optimizing for years.



Diagnosis of development process

In demand management, in development and testing processes, in quality delivered and in suppliers control and management.

Thank you!

Govern the stars with us!

agutierrez@leda-mc.com

More at www.leda-mc.com