

#### FUTURO DE COSMIC

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# Agenda

#### The future of:

- COSMIC in industry
- COSMIC research
- The COSMIC organization





# COSMIC in industry

How can we best support the use of the COSMIC method



#### **Better Project Effort Estimates**



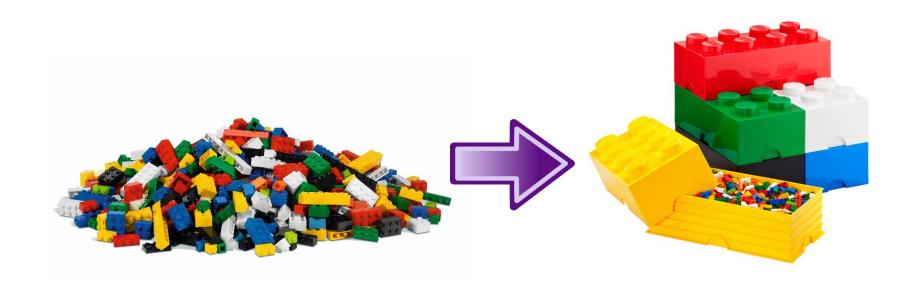
- Early decision support
- Estimate the real size
- Tracking of the development process



#### Early Size estimation



 Quick methods to determine size to support project effort estimates





#### Estimate the real size



- Different "sizes" for different goals
- Insight in NFR that become functionality



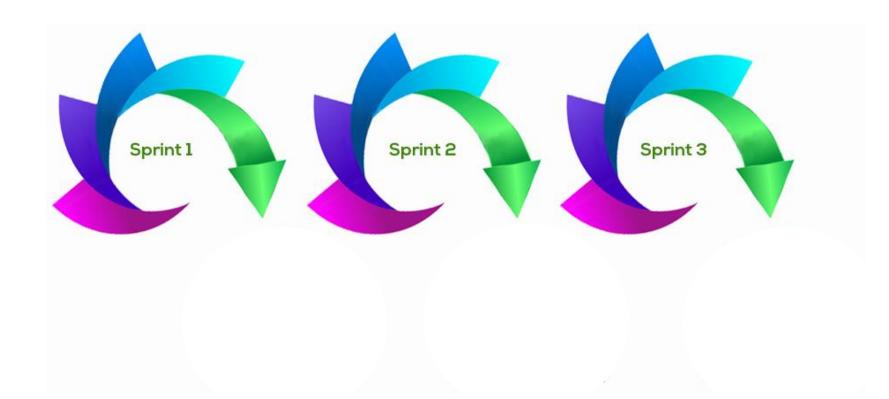




## Tracking the development



- Measure the size a rapid as you develop
- Benchmarkable size for feedback





# Benchmarking

More than "one size fits all"





#### Case Studies

Size



Guideline for sizing simple mobile apps

Use in contracts



How to combine Agile (highly flexible) with outsourcing (tend to be rigid)



### Community Support





## COSMIC Research

#### What fundamental answers do we need?

- Measurement 'étalons' as in sciences & engineering
- Measurement instrumentation: traceability to 'étalons'
- Measurement legal infrastructure for business



#### Automated measurement

#### Model Driven Requirements

- Proof of concepts that it works:
  - with very high accuracy
  - With a very detailed verification protocol
  - in conformity to ISO standard ISO 19761
- Implementation in a large industry context at Renault



Work in progress with other technologies



#### Automated measurement

#### Contributing Universities

- Model Driven Requirements
  - Ecole de technologie superieure -Université du Québec (Canada)
  - Université Versaille St-Quentin (France)
  - Politecnica Valencia (Spain)
- Textual Requirements
  - Concordia University (Canada)













#### Estimation from requirements

- Quality of requirements:
  - Completeness
  - **Ambiguities**
  - inconsistencies
- Definition of quantitative scales in requirements documents (as in engineering plans)
- Mandatory presence of quantitative scales for written requirements
  - Models of requirements
  - Textual requirements
  - Whatever techniques for requirements



#### Software Architecture (& Design)

- Currently, software 'engineers' do not use measurements!
  - Are they really 'engineers' if they cannot measure what they do or promote as 'best practices'?
- Functional sizing should be:
  - an integral quantitative control within a software architecture...!
  - a mandatory tool of software engineers...!



# COSMIC organization

What will COSMIC look like in a decade



# Spread the word





## Take up the challenge

- Inspire the software engineers to start measuring properly, and help them improve
- Encourage users of pseudo metrics to get serious and use proven best practices
- Facilitate 1<sup>st</sup> generation FSM users to enter the next generation, without losing valuable metrics history



#### Stimulating growth

 Countries without a historic FSM preference can start with the best practices available





#### Building a community

More democratic, less reliant on Founders







#### Building a community







5-7 October

Cracow



## Cooperation with others

















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#### Recap

- COSMIC can help in improving the quality of Software Project Estimates
- COSMIC needs to improve the use in projects and benchmarking
- COSMIC is based on fundamental software engineering principles and is a fully open source method
- COSMIC is building a community to promote and support FSM



#### QUESTIONS?

### **ANSWERS!**

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www.cosmic-sizing.org