**Project Controls Expo – 22ⁿᵈ November 2018
Melbourne Cricket Ground**

Integration 2.0

The road to an improved project cost management environment

About Gideon Klipstein

Degree

- Bachelor Business Adminstration
- Postbachelor Consulting & Coaching
- Postmaster Strategic Accountmanagement

Experience

- Vice President Business at Cost Engineering Consultancy
- Sales, tendering & account management in Europe, Middle East & APAC regions
- 8 years of experience in commercial consulting roles for various industries

About Cost Engineering Consultancy

20 Years of industry experience

Operating Worldwide

Cleopatra Enterprise

Academy

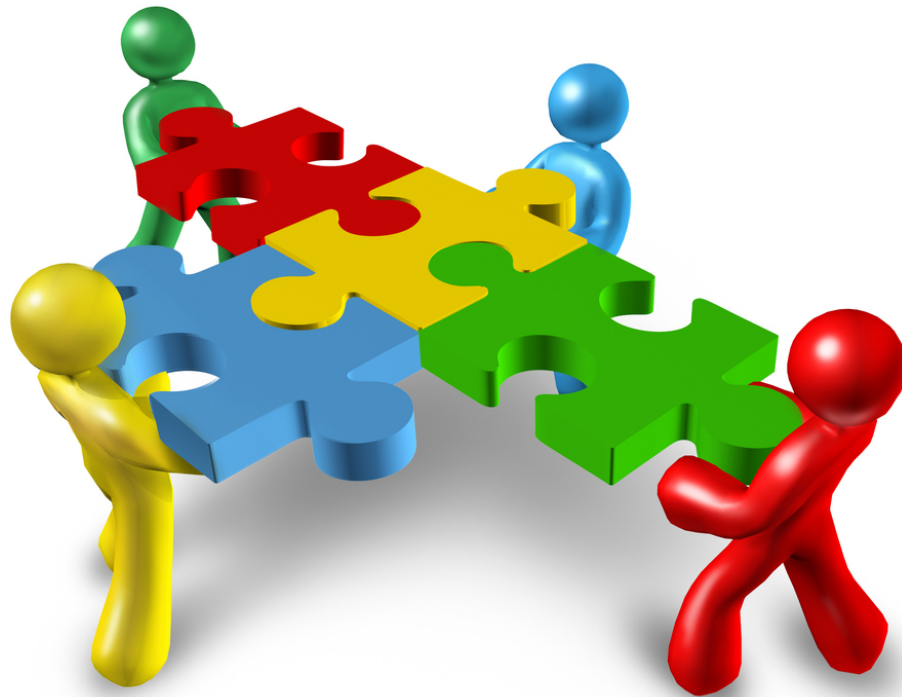**Consultancy**

CESK Knowledgebase

Integration 2.0

- Integration of what?

- Integration in Project Controls

- Bottlenecks

- Various ways to integrate

- Case study: Heineken

- Case study: Enbridge

- Q&A

integration
/ɪntɪˈɡreɪʃ(ə)n/
noun
noun: **integration**;
plural noun: **integrations**

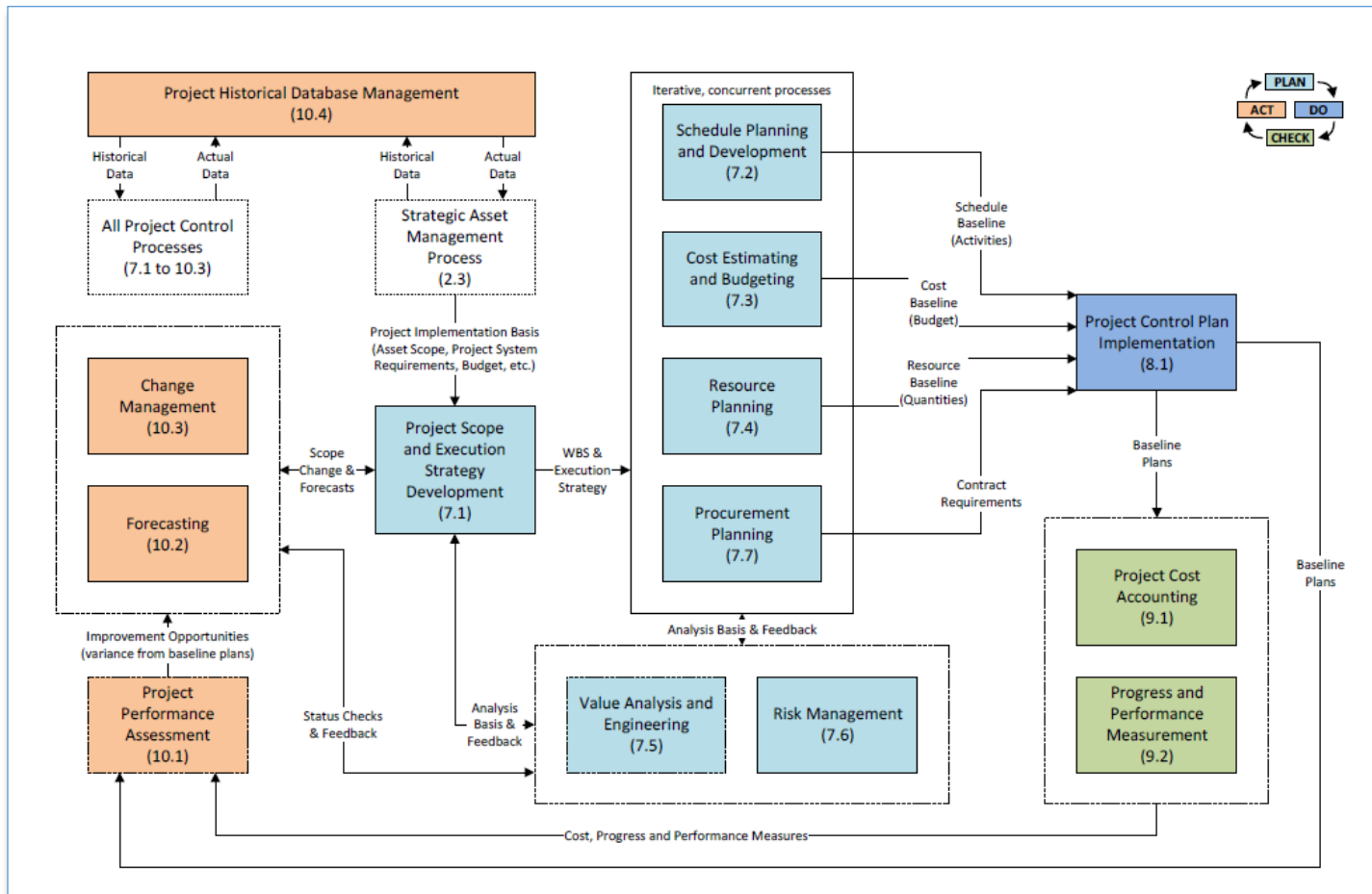# Integration of what?

Let's ask Google…

Reminds me of...
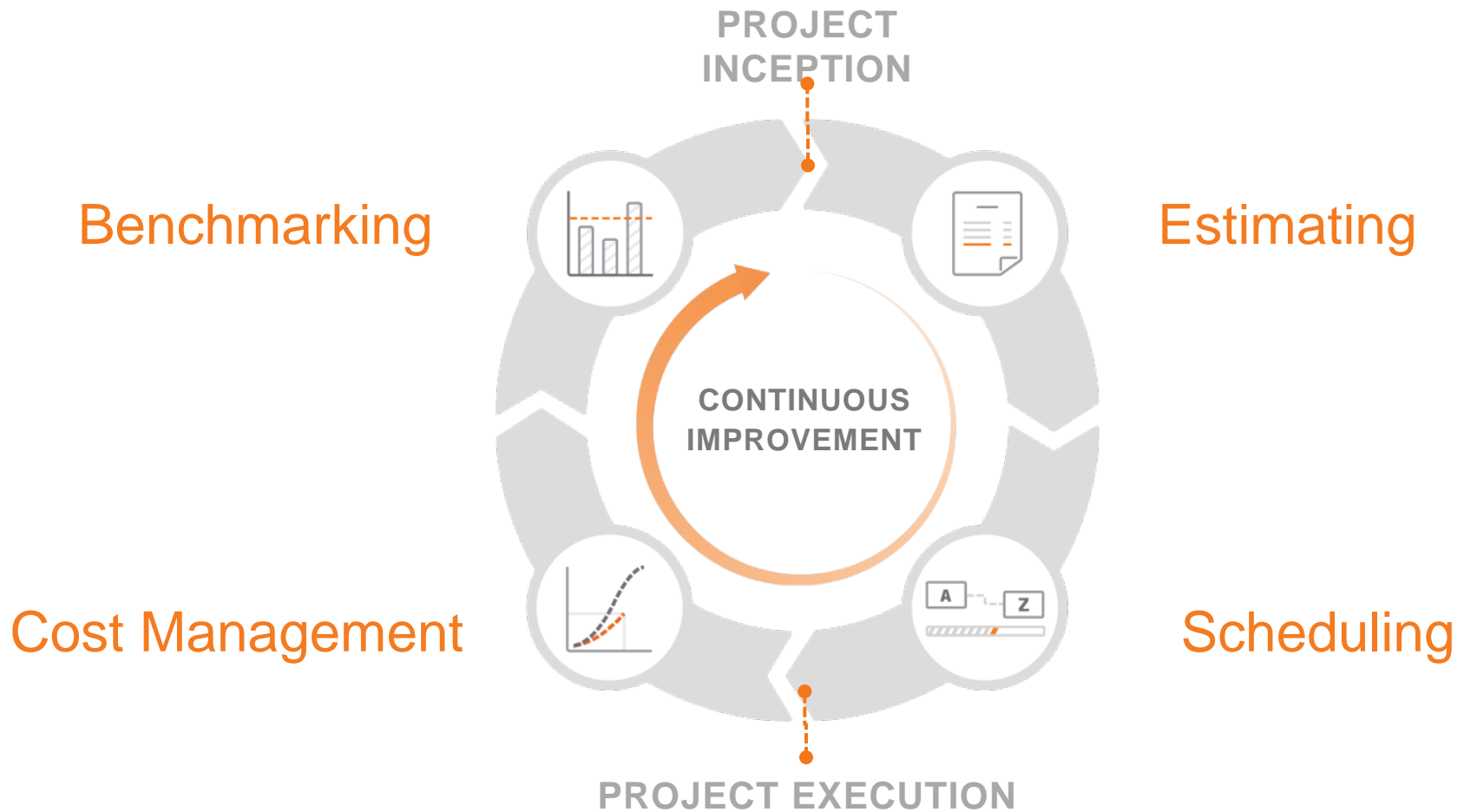
Integration in Project Controls

?

What comes to mind?

TCM Framework

Integration according to Cost Engineering

PROJECT INCEPTION

Benchmarking

Estimating

CONTINUOUS IMPROVEMENT

Cost Management

Scheduling
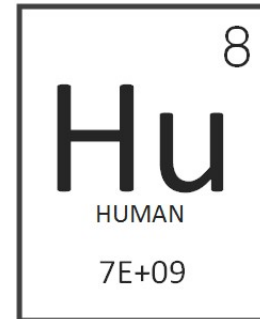
PROJECT EXECUTION

Integration Bottlenecks

- People goals vs. Department goals vs. Company goals
- No alignment between various tools
- The Human element
- …

$$Hu^8$$

HUMAN

7E+09

<u>Integration is change in its most complex way</u>

Change!

"The people who resist change will be confronted by the growing number of people who see that better ways are available; thanks to technology."

-Bill gates

Project Controls
EXPO

CLEOPATRA

Also: Change…

Various ways to integrate

Integration of project cost processes

- I.e. Cost estimating > Scheduling > Cost control > Benchmarking

Integration of Process, Tooling & Knowledge

- Alignment of various resources to create optimal situation

Integration of Client & Contractor

- Co-creation as the ultimate partnership

Various ways to integrate

Integration of Process, Tooling & Knowledge

- Alignment of various resources to create optimal situation

Case Study: Heineken

- Established in 1873 in Amsterdam

- Global presence with 300 brands of beers & ciders

- Production facilities in over 70 countries

- Production of 218 Million Hectoliters in 2017

- 80.000 employees

- Revenue of almost $ 25 billion

Project controls @ Heineken

Situation

- Corporate head office responsible for cost estimates

- Local operational companies responsible for cost control

- No dedicated cost controllers, responsibility of project manager

- No dedicated tooling

Objectives

- Make better & faster cost estimates from a standard format

- Ease the cost control processes for project managers

Cost Estimating

Needs Assessment Workshop

- Assess the working process & role of estimating within the company

- Assessment of needs for data, methods, terminology, etc.

- Available inputs & desired outputs

Result: roadmap towards implementation & process improvement

Cost Estimating

System set-up

- Set up of standard template & building blocks of brewery estimate

- Capacity factored equipment object models

- Plugin to automate updating these models based on historical quotes

- Use of benchmark information for applying local information

- Implement control structure inside estimate template

- Provide extensive training & consultant support to work with the system as planned

Cost Management

Next step: Optimize cost control processes for project managers

- Different needs: Specialists vs. Generalists

- Different approach: Buy-in from project managers

- Acceptance by result: Pilot project

Meoqui plant, Mexico

Cost Management

Implementation after pilot project

- Reporting standardized

- Integration with SAP simplified

- Quick Reference Guide created
  for PM group

Enduring difficulties

- Low level of knowledge & focus with
  Project Managers

- Little consistency in SAP
  data structure

- Large differences between locations

Process Adjustment

Different approach

- Cleopatra providing a dedicated consultant for Cost Control

- Deliver SAP data in pre-defined format

- Consultant manages global large projects portfolio

Project Controls @ Heineken

Current results

- Estimates are built up approximately 40-50% faster than in the pre-Cleopatra era

- Current project portfolio is managed centrally with almost 70% of current projects within budget

- The remaining 30% of projects is dealing with an overrun of maximum 3%.

Various ways to integrate

Integration of project cost processes

▪I.e. Cost estimating > Scheduling > Cost control > Benchmarking

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Integration of Client & Contractor

▪ Co-creation as the ultimate partnership

Various ways to integrate

Integration of Client & Contractor

- Co-creation as the ultimate partnership

Case Study: Enbridge

- Established in 1949 in Calgary, Canada
- North America's largest energy infrastructure leader
- More than 27.000 km of pipelines
- Generating 1.750 MW renewable energy
- 12.000 employees
- Revenue of almost $ 25 billion

Project Controls @ Enbridge

Situation

- Intensively improving process, tooling & knowledge since 2007

- Implemented various methodologies, databases & tools, among which Cleopatra for Cost Estimating

- Satisfactory results when it comes to estimating direct costs

- AACE International paper: Path to predictability

Gap

- Managing existing assets

- Improve on managing systemic risks

Client & Contractor: Match!

Client wish

- Implement a tool for Benchmarking purposes

- Being able to further analyse projects & assets

Cleopatra wish

- Close the loop from execution to estimating

Project Benchmarking module

Developing a new module within Cleopatra to serve all our purposes

1. Contractual agreement

2. Initial specification workshop

3. Mock-up version development

4. Development sprints with direct client feedback

5. Beta testing by client

6. Pilot implementation by integrated consultant

7. Release!

Project Benchmarking module

Result

- Improved decision making on project portfolio investments

- Analysis of risk trends along stage gates

- Big Data analysis to improve estimating

- Derive metrics on asset level

- Normalization of benchmark data

Future developments

1. Field change mobile application

2. Risk management module

3. Implement machine learning

Change!

"Innovation is the ability to see changes as an opportunity. Not a threat."

-Steve Jobs

Thank you for listening!

Q&A