Doing Multiphase Economic Analysis, Like a Boss!

Raden Irfan Fajar PURNOMO, Yan Bastian PANGGABEAN,
Erwin Andri KUSUMA

Present for SIS Global Forum 2019

Bangkitkan Energi Negeri

PERTAMINA

Introduction: Presenters

Yan Bastian Panggabean

8+ years experience in Oil & Gas

Working for PERTAMINA EP Cepu, subsidiary of PERTAMINA Group

Specialty:
Petroleum Economic, Project Management, Risk Management

Raden Irfan Fajar Purnomo

7+ years experience in Oil & Gas

Working for PERTAMINA EP Cepu, subsidiary of PERTAMINA Group

Specialty:
Chemical Engineering, Petroleum Economic, Project Management, Risk Management

PERTAMINA EP CEPU

Schlumberger

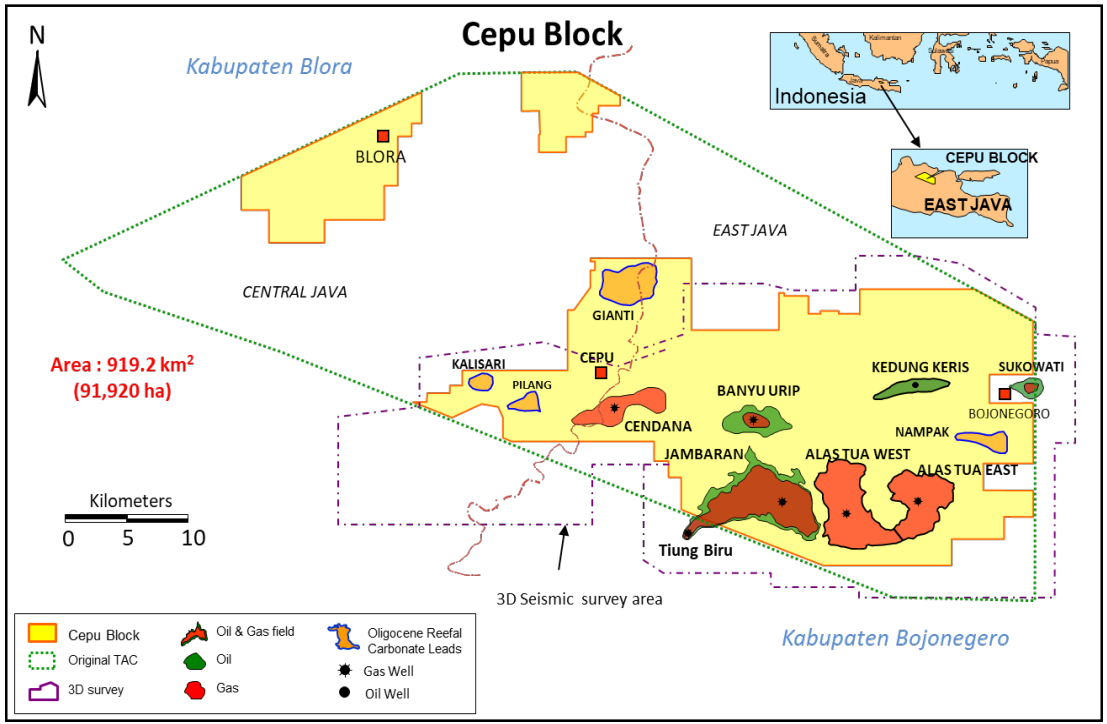
Agenda

- Project Background
- Problem Statement
- Solution
- Conclusion
- What Next?
- Q&A

PERTAMINA
EP CEPU

Schlumberger

Introduction: PT Pertamina EP Cepu



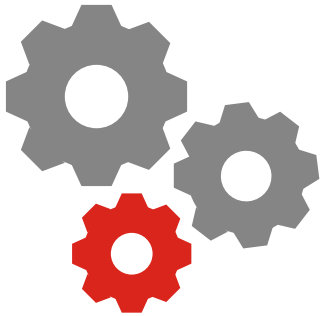
- Production: B Field
- Development: J Field, K Field
- Exploration: Others Field

- Current Production ± 200MBOPD

PERTAMINA EP CEPU

Schlumberger

Project Background (Motivation)



- PEPC need a robust Economic Calculation Tool
- PEPC need a comprehensive multiphase economics analysis

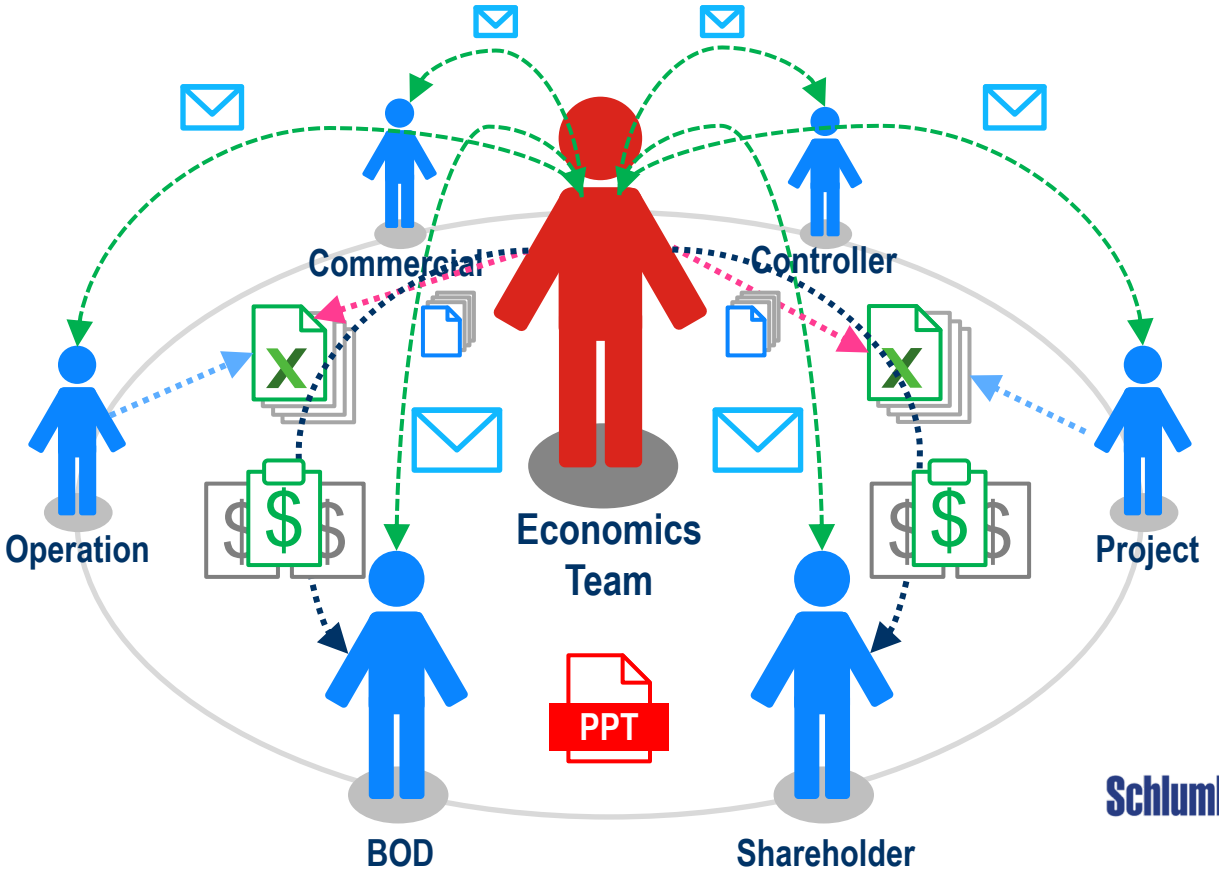
Provide Comprehensive Economics Analysis

PERTAMINA EP CEPU

PERTAMINA

Project Background
(Conventional Solution: Workflow)

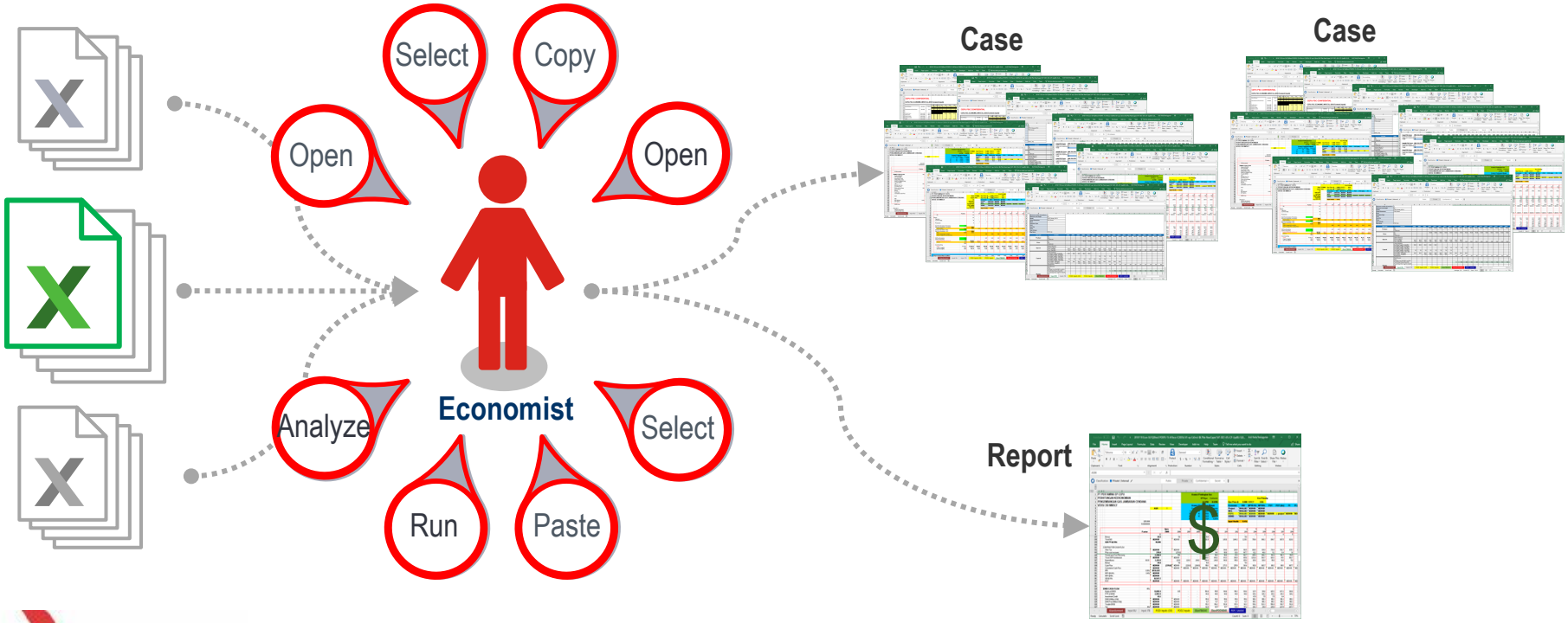
- Request Workflow



PERTAMINA
EP CEPU

Schlumberger

Project Background
(Conventional Solution: Perform Economics)



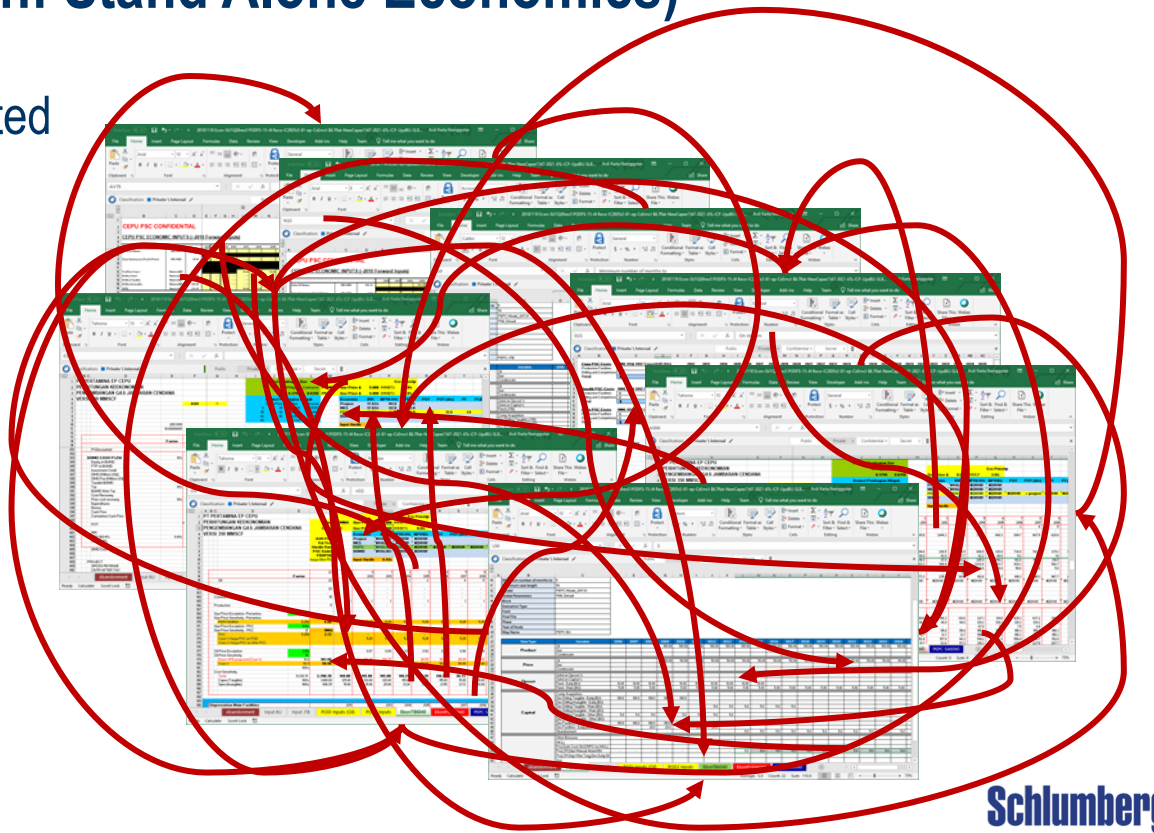
PERTAMINA EP CEPU

Schlumberger

Project Background
(Conventional Solution: Stand Alone Economics)

- The formula is complicated
- Hard to track formula
- Takes time
- Hard to track changes
- Run slow

- Consolidation?
- Incremental?

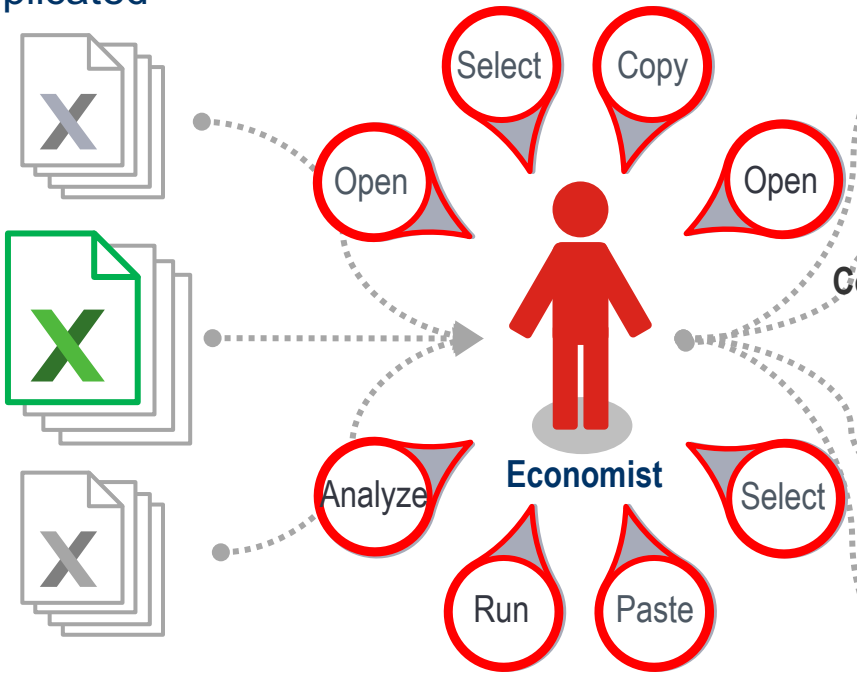


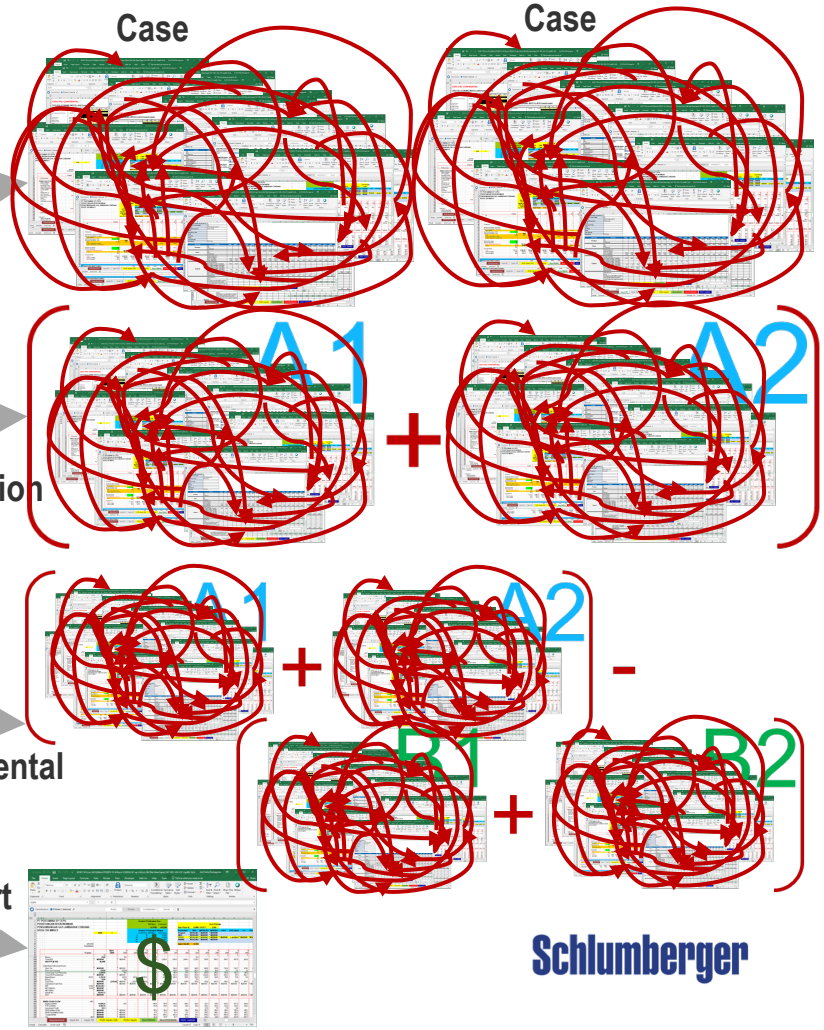
PERTAMINA EP CEPU

Schlumberger

Project Background
(Conventional Solution: Multiphase Economics)

Multiphase economics is more challenging and complicated



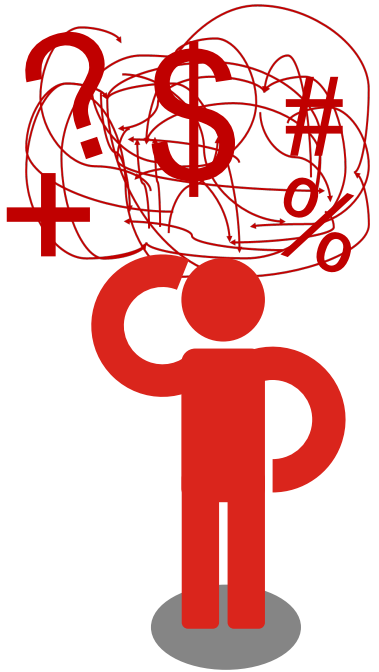


PERTAMINA EP CEPU

Schlumberger

Problem Statement

- Perform multiphase economics using conventional solution:
  - Challenging and complicated
  - Takes time & effort (quantify?)
  - Unreliable result
- Data gathering (within internal teams) is a laborious task:
  - Prone to human error
  - Takes time & effort (quantify?)
  - Sudden data update is stressful



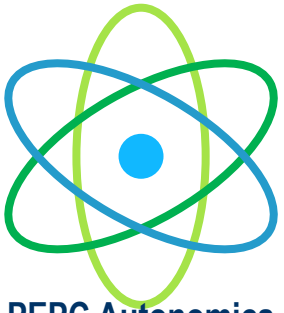
PERTAMINA EP CEPU

Schlumberger

Solution

- PEPC need a standard economic model
- PEPC Need an economic calculation engine that:
  - Perform multiphase economics
  - Easy to use
  - Provide robust economic result

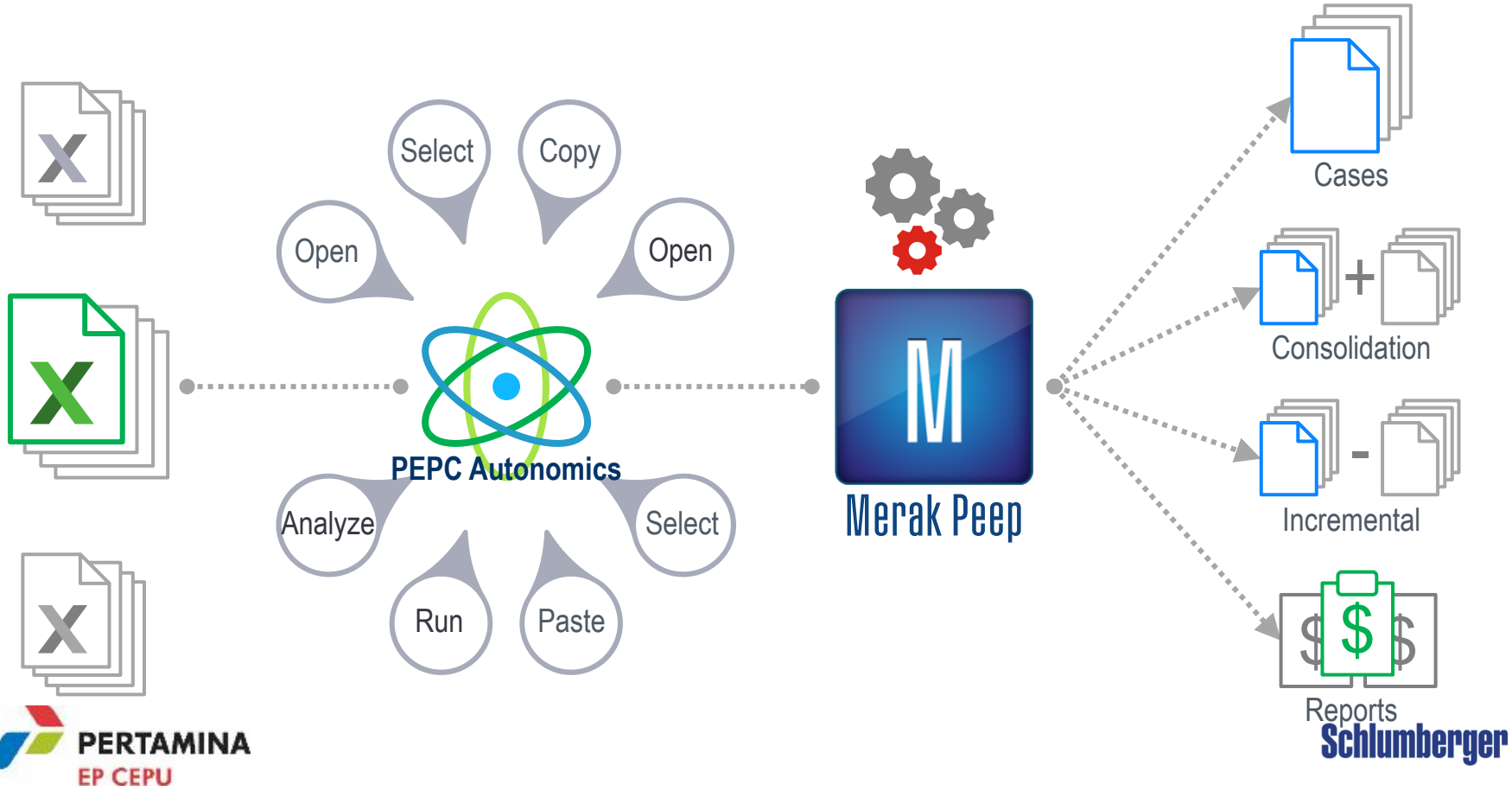
- Solutions that reduce unnecessary laborious task



PERTAMINA EP CEPU

Schlumberger

Solution


Select
Copy
Open
Open
PEPC Autonomics
Analyze
Select
Run
Paste
Merak Peep
Cases
Consolidation
Incremental
Reports
PERTAMINA
EP CEPU
Schlumberger

Solution

Like A Boss!

PERTAMINA
EP CEPU

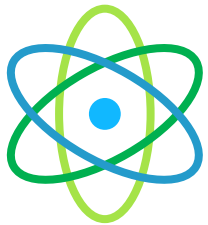
Schlumberger

Conclusion

- Merak Peep is one single source of truth for economic analysis
  - Now PEPC can perform multiphase economics analysis with confidence

- PEPC Autonomics is one single tools that handle unnecessary tasks:
  - Read data automatically
  - Run tasks automatically
  - Perform economic calculation automatically

Merak Peep



PEPC Autonomics

PERTAMINA
EP CEPU

Schlumberger

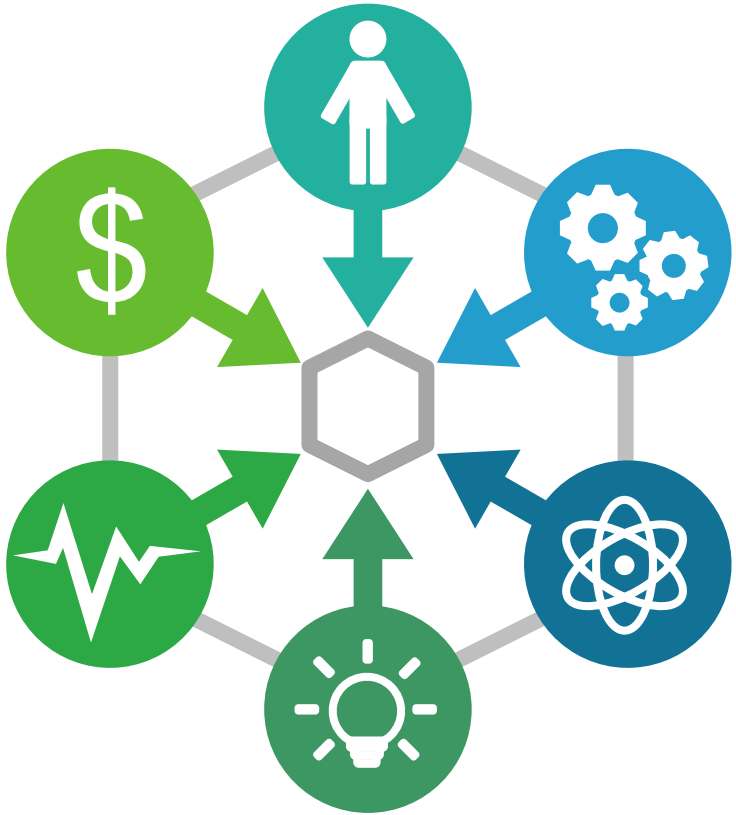
What Next?
(Next Challenges)

- Perform Economics online and can be accessed via mobile phone
- Dashboarding that provide comprehensive economics information that can be used by various department
- Portfolio Management
- Integrated working environment to help teams is needed: Peep and PEPC Autonomics only can help Economics team, not other teams

What Next?
(IBOSS: Integrated Business Operating System & Support)

Integrated Environment:

- Team
- Data
- Knowledge



PERTAMINA
EP CEPU

Schlumberger

THANK YOU

PERTAMINA
EP CEPU

Schlumberger