



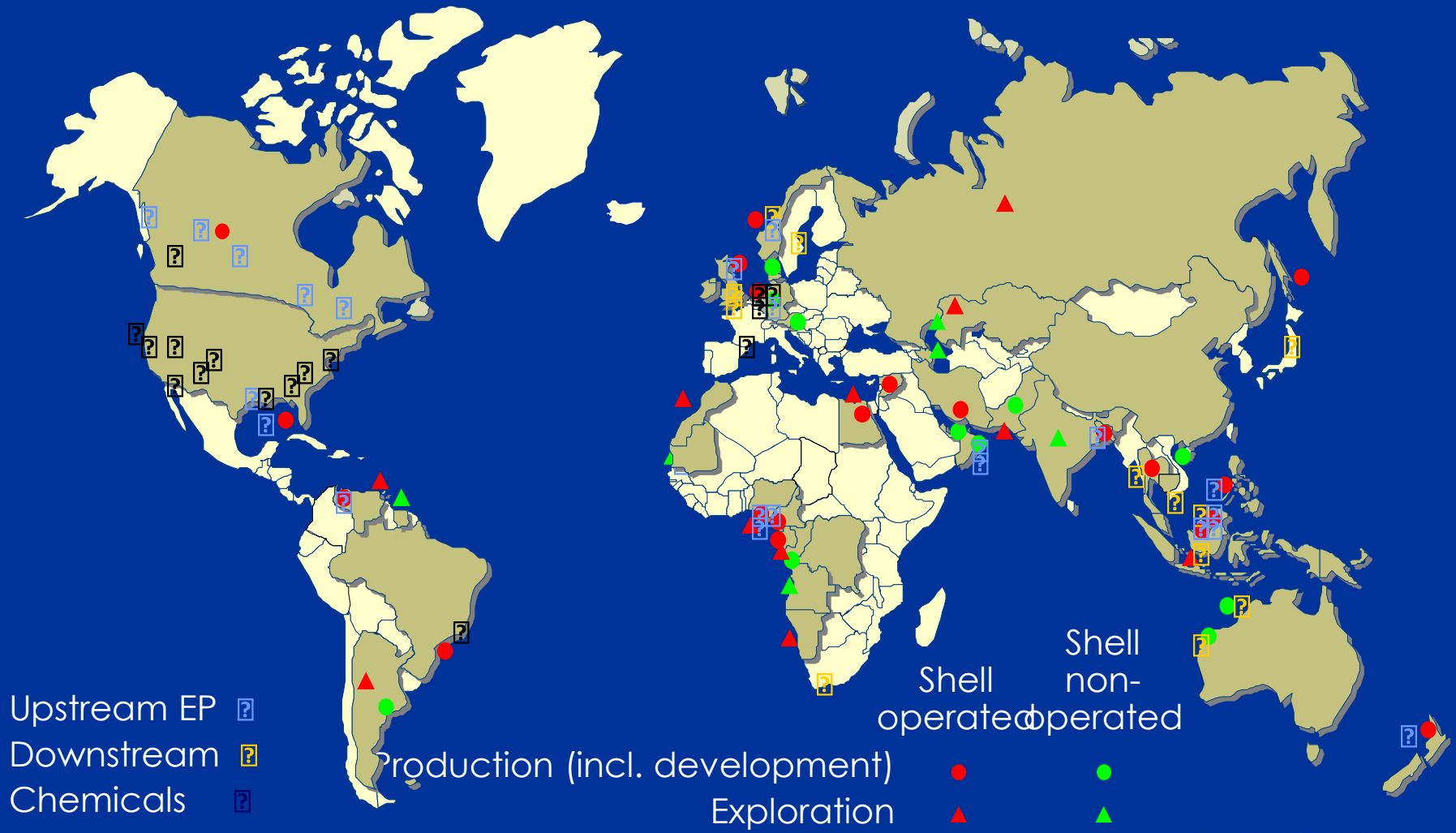
Business Empowerment

Bert van den Berg

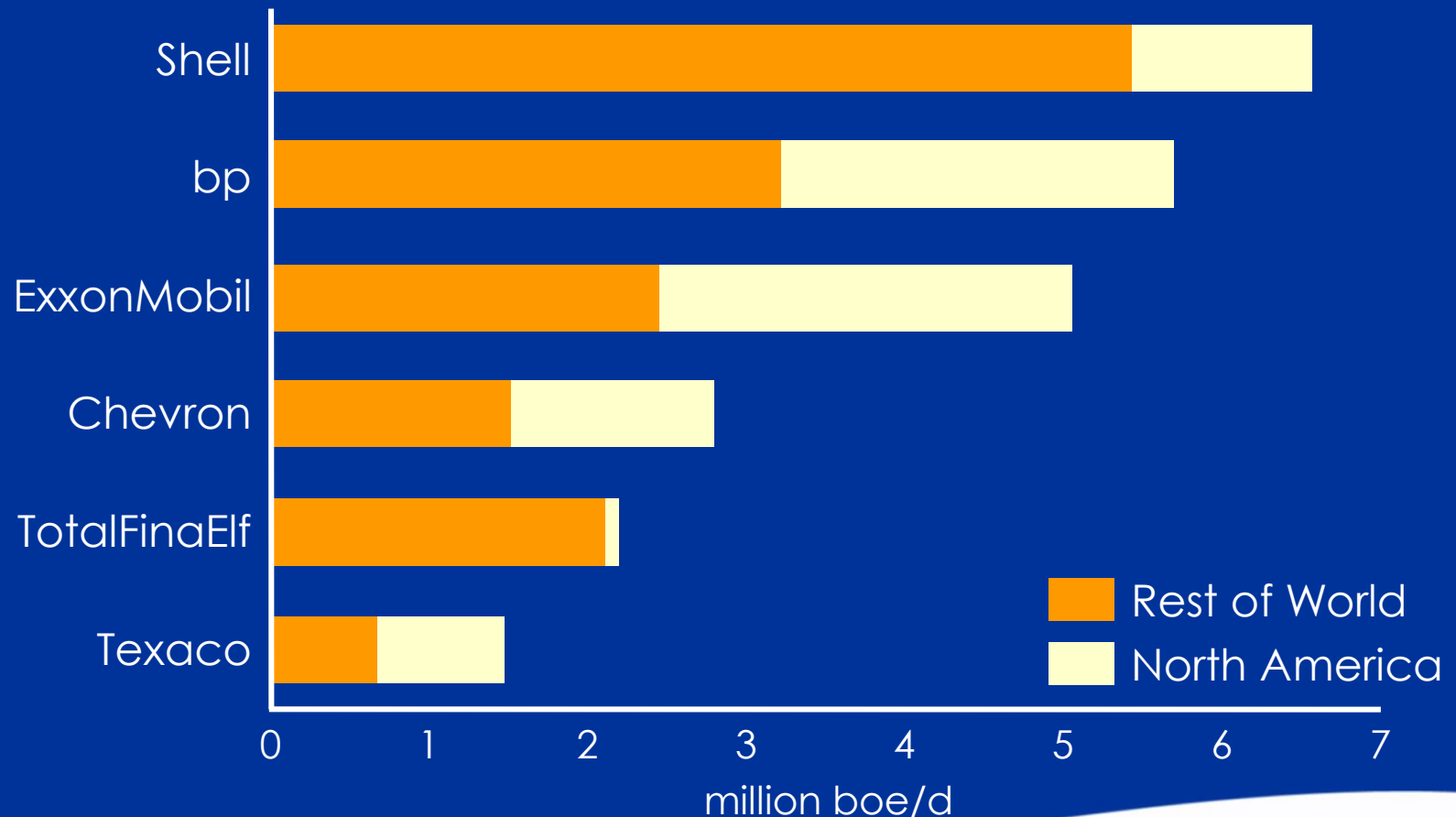
11 March 2000 / Monterey



Shell Group E&P interests and ?

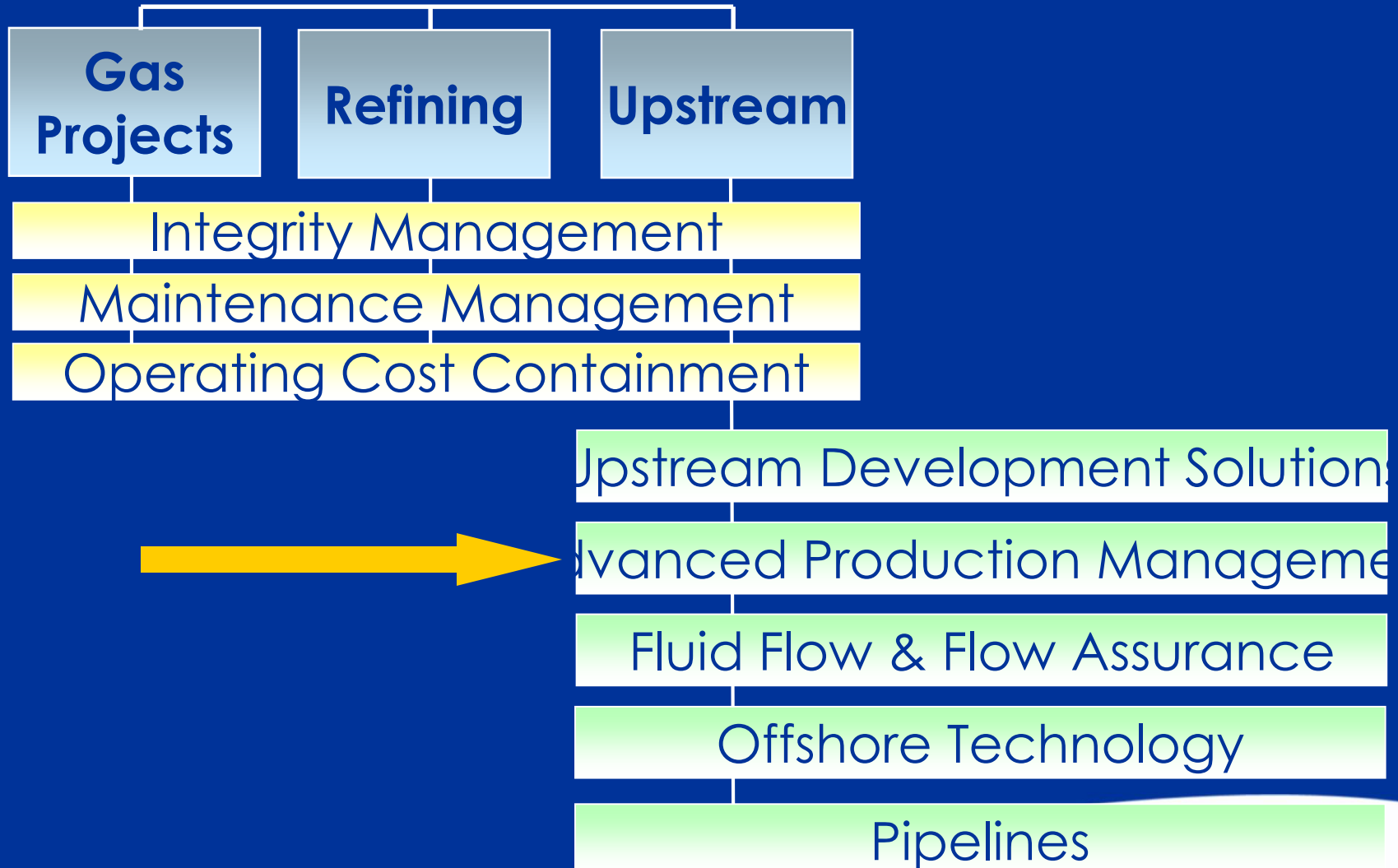


Major companies - operated oil & gas production



Shell Global Solutions

Global Experience:



Advanced Production Management Products & Services:

Production Review

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graph TD; A([Production Review]) --> B[Production Optimization]; A --> C[Production Measurement]; A --> D[Hydrocarbon Management];
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Production Optimization

- *Integrated System Modeling & Evaluation*
- *Computer Assisted Ops*
- *Online applications*
 - *steady state*
 - *dynamic*

Production Measurement

- *Single phase metering*
- *Multiphase Metering*
- *Wet Gas Metering*
- *Metering philosophies*

Hydrocarbon Management

- *Hydrocarbon Accounting*
- *Forecasting*
- *Operating philosophies*

EP world before

- Corporate business planning cycle,
1 and 5 year plan
- Disconnected business processes
between disciplines
- Organization silo's. O, E, CP, F, HR

EP world before

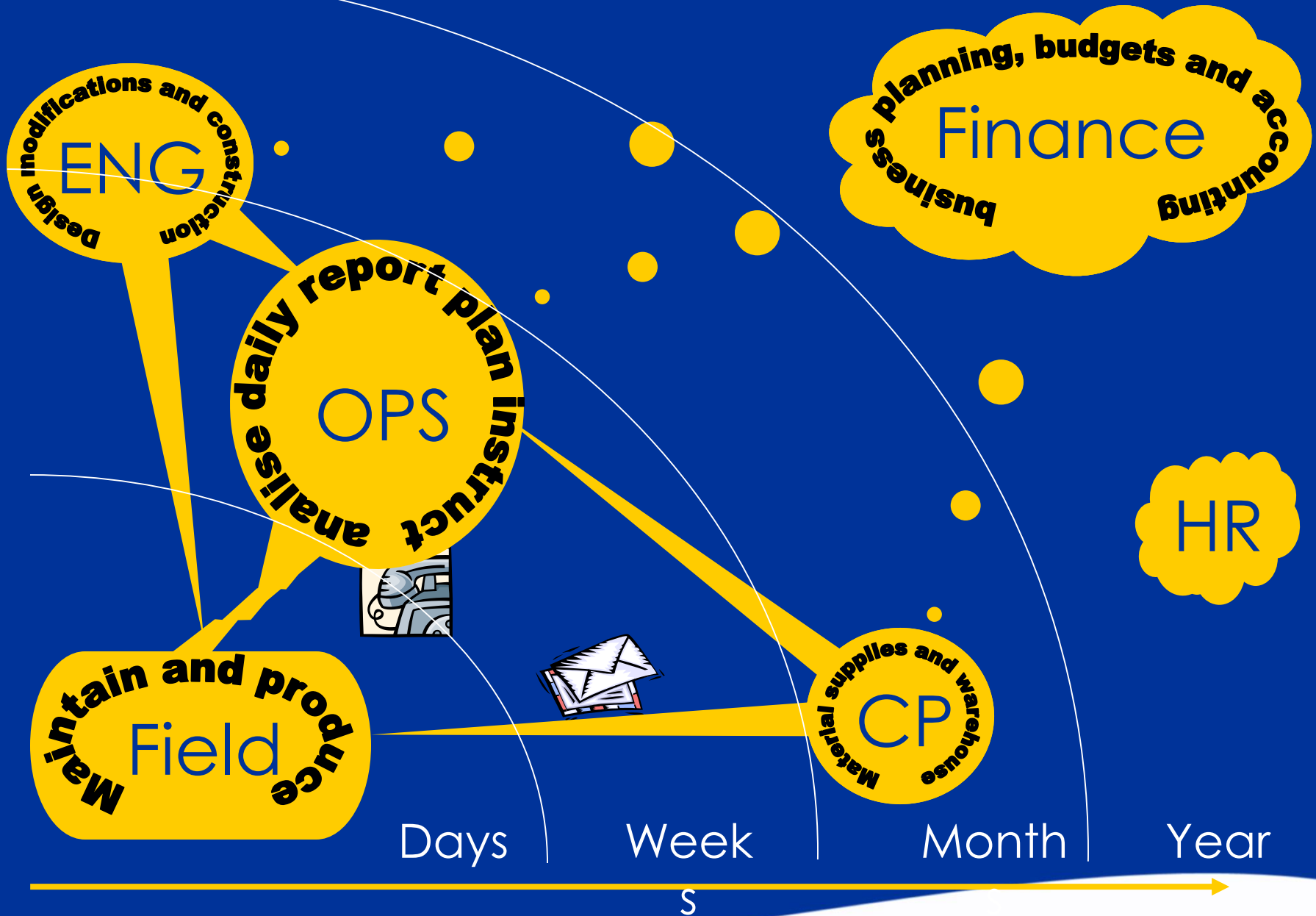
- Dataflow limited and simple status info only
- Some SCADA systems since the early '70
- Daily report by telex or fax
- Limited time span data history
- Process data for troubleshooting:



manual sampling or
recorded for special data

Work Processes elapse times

- Production target intervention 1-3 days
- Production optimisation 1-4 weeks
- Optimisation single focus activities
- Selective reactive response to field events



External Business influences

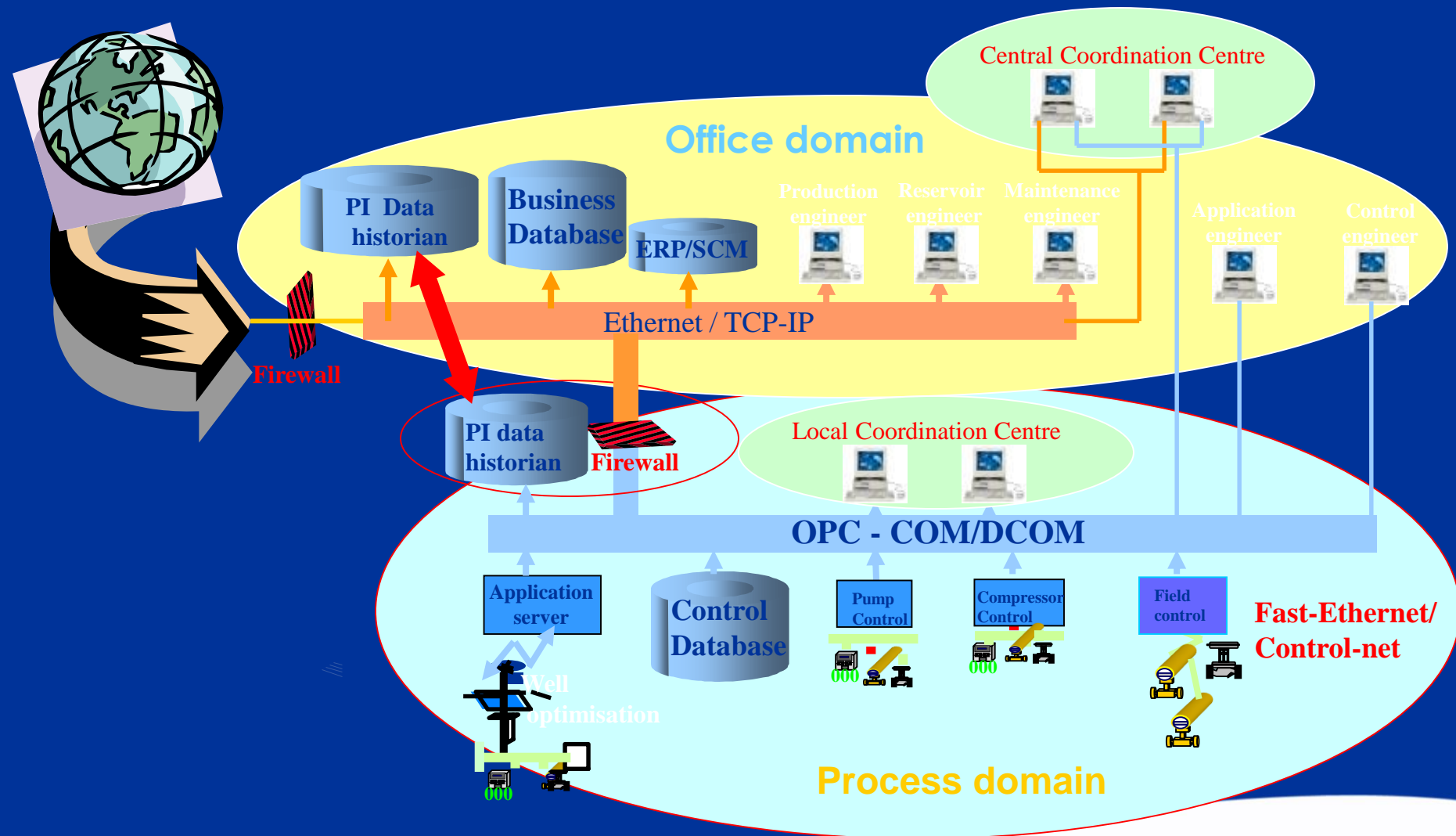
- Culture change: “Trust me” \Rightarrow “Show me”
- Environment legislations “public perception”
- Safety & Health care
- New Challenges in competitive world
- Liberalization on the gas market
- Spot market sale

New Business focus

- License to operate “operator of first choice”
- Tighter product specification control
- Capacity and dispatching control
- Emission control
- Spot market sales, hourly billing
- Flexible IT infrastructure
- Flawless



connects office & plant



EP world with

- No limitation on data gathering
- No limitation on global data distribution
- Daily gauge off reporting on-line
- Scrolling reports between reporting times
- Data available full life cycle of the facility



Deployment of data

- Monitoring daily production targets
- Emission control (“License to operate”)
- Consumables use and replenishment
- Equipment monitoring (“health care”)
- Real time optimization
- Integrity management
- Production modeling



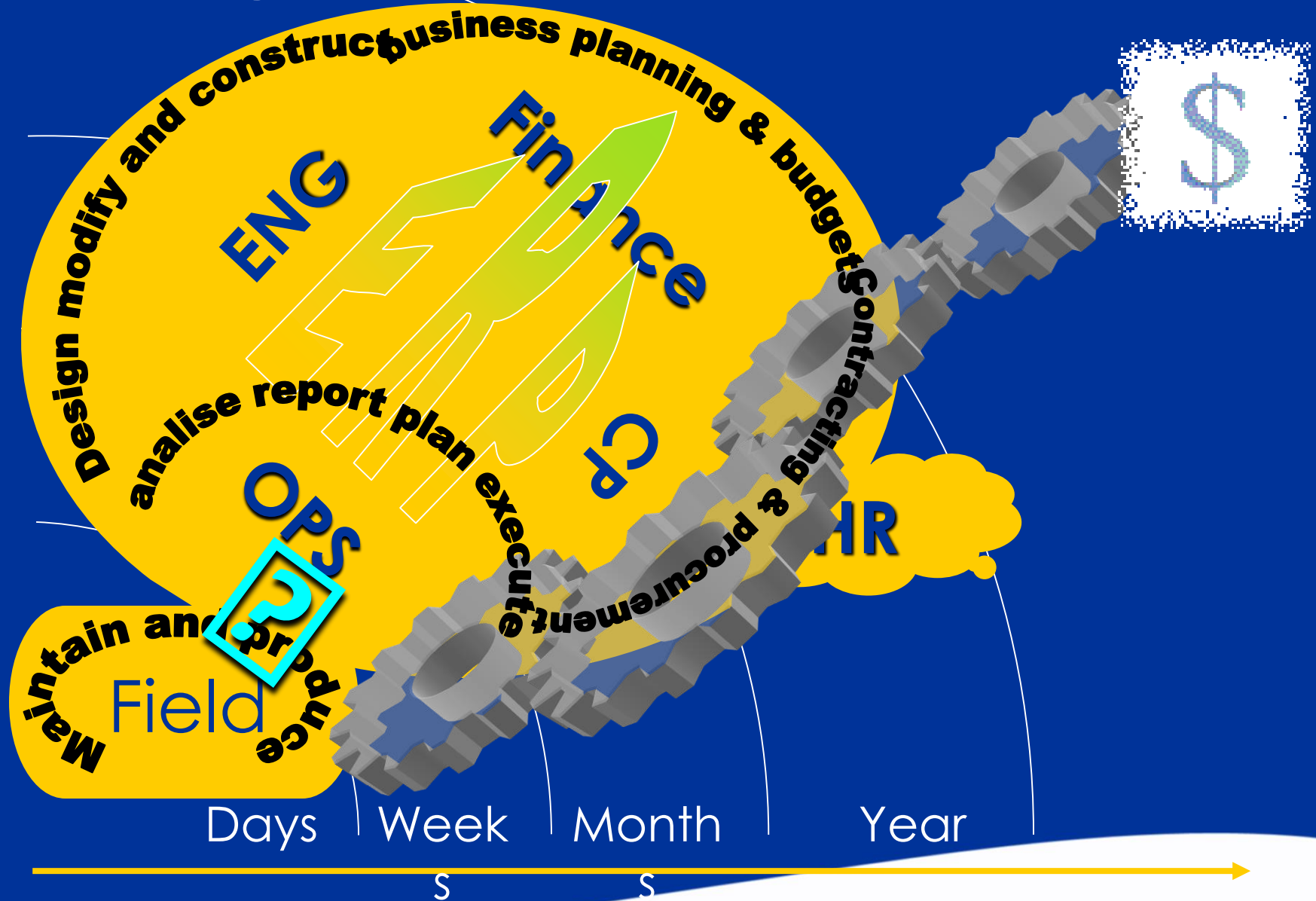
enables

- Close to real time updating of planning tools
- Tracking of revenue streams and optimize
- Auditable Emission reporting
- Remote managing consumable replenishment
- Equipment performance monitoring by
- Life cycle time integrity management
- Real time optimization





Integrated Business Processes





Empowered business

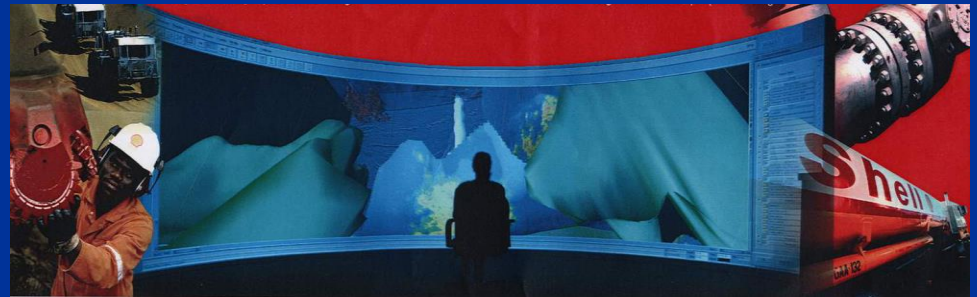
- PI expose the secrets of the plants
- Respond to customers requests
- Maximize market opportunities
- Decisions are “all embracing business facets”
- Business decisions “less uncertainties”
- Synchronized business processes



Shell technology



The Difference is Technology



Our People make the Difference

and we choose ?

Thanks for listening