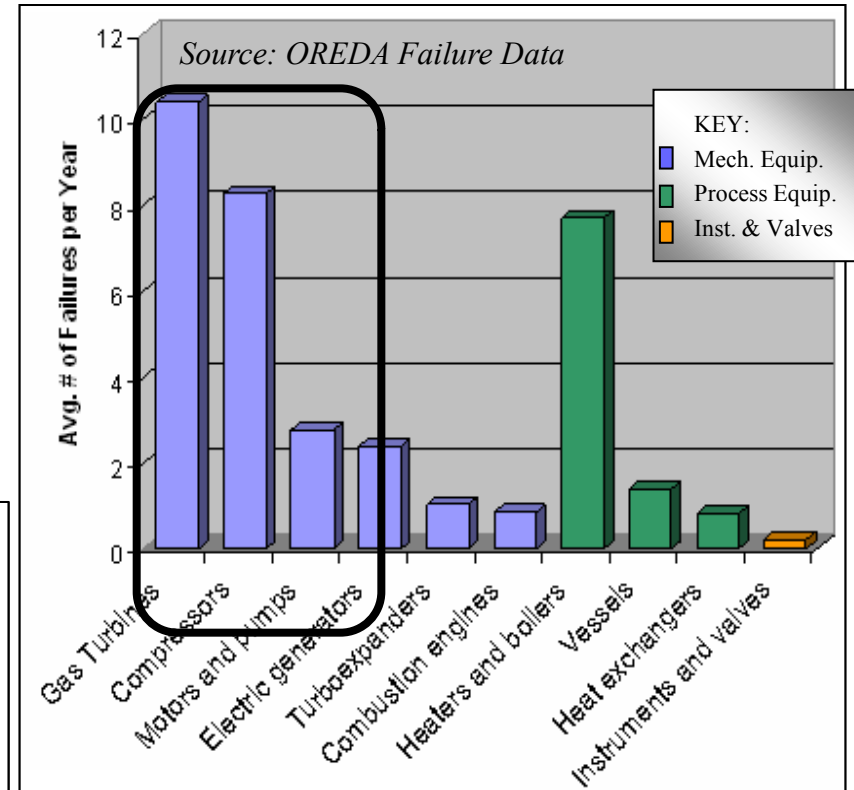
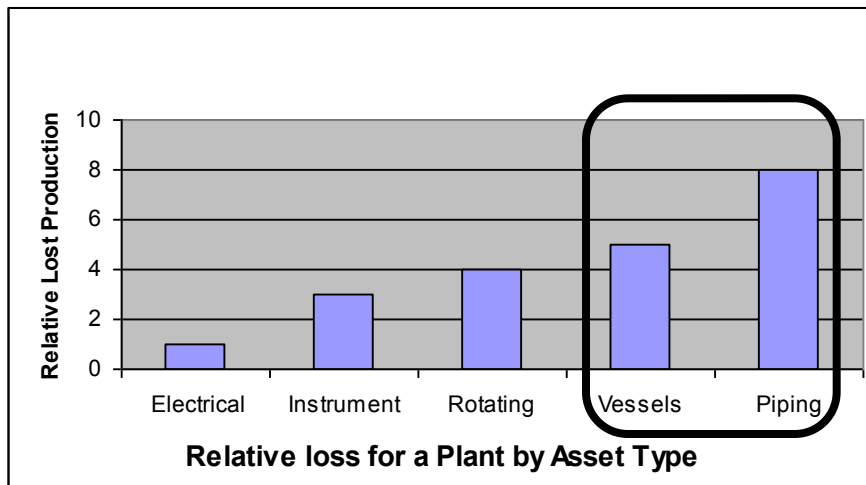


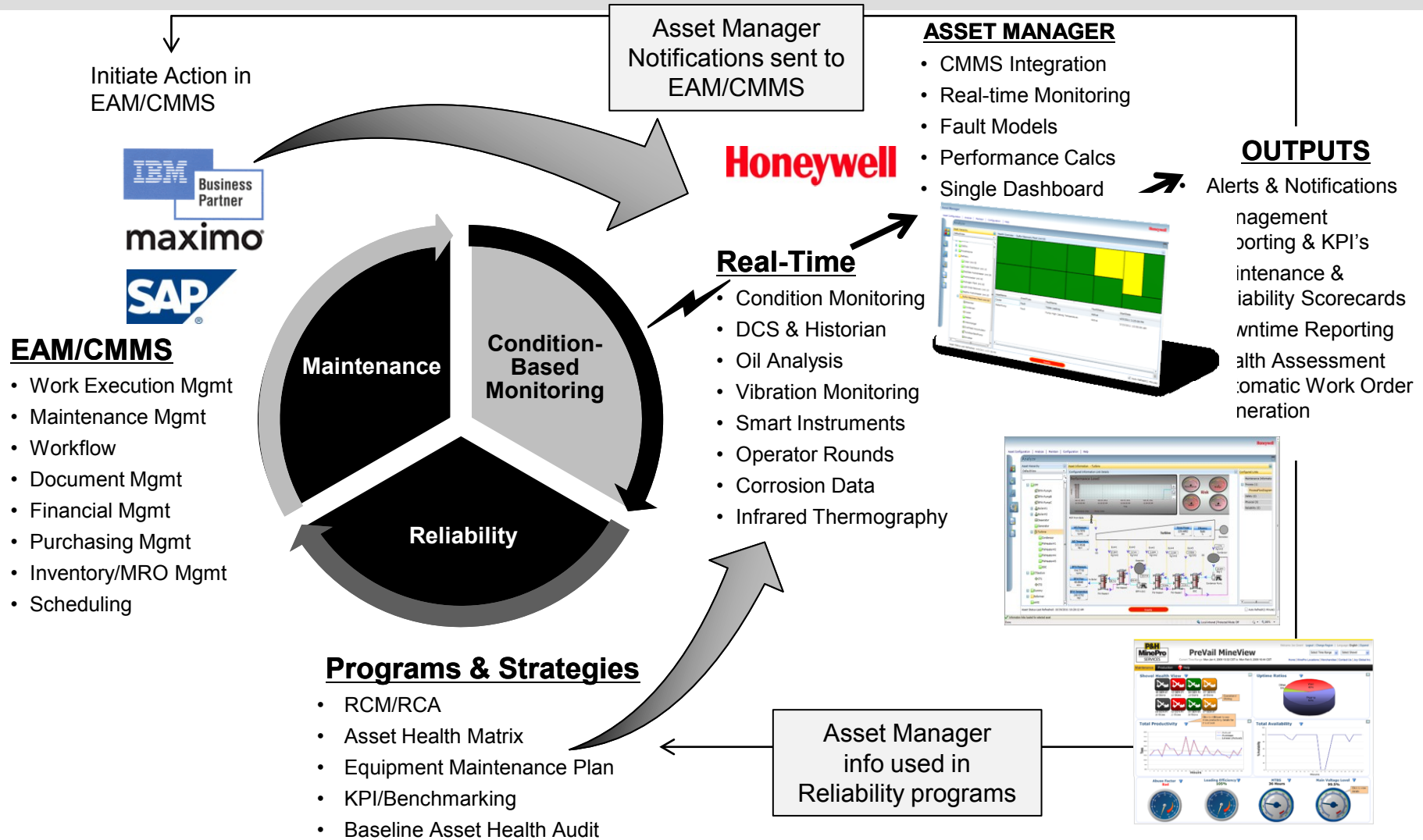
Process Industry PHM Needs

- Risk Reduction
 - Safety & Environmental
- Increase Uptime
 - Reduce unplanned downtime
 - Reduce frequency & duration of turnarounds
- Cost Reduction
 - Reactive work more expensive
 - Secondary damage

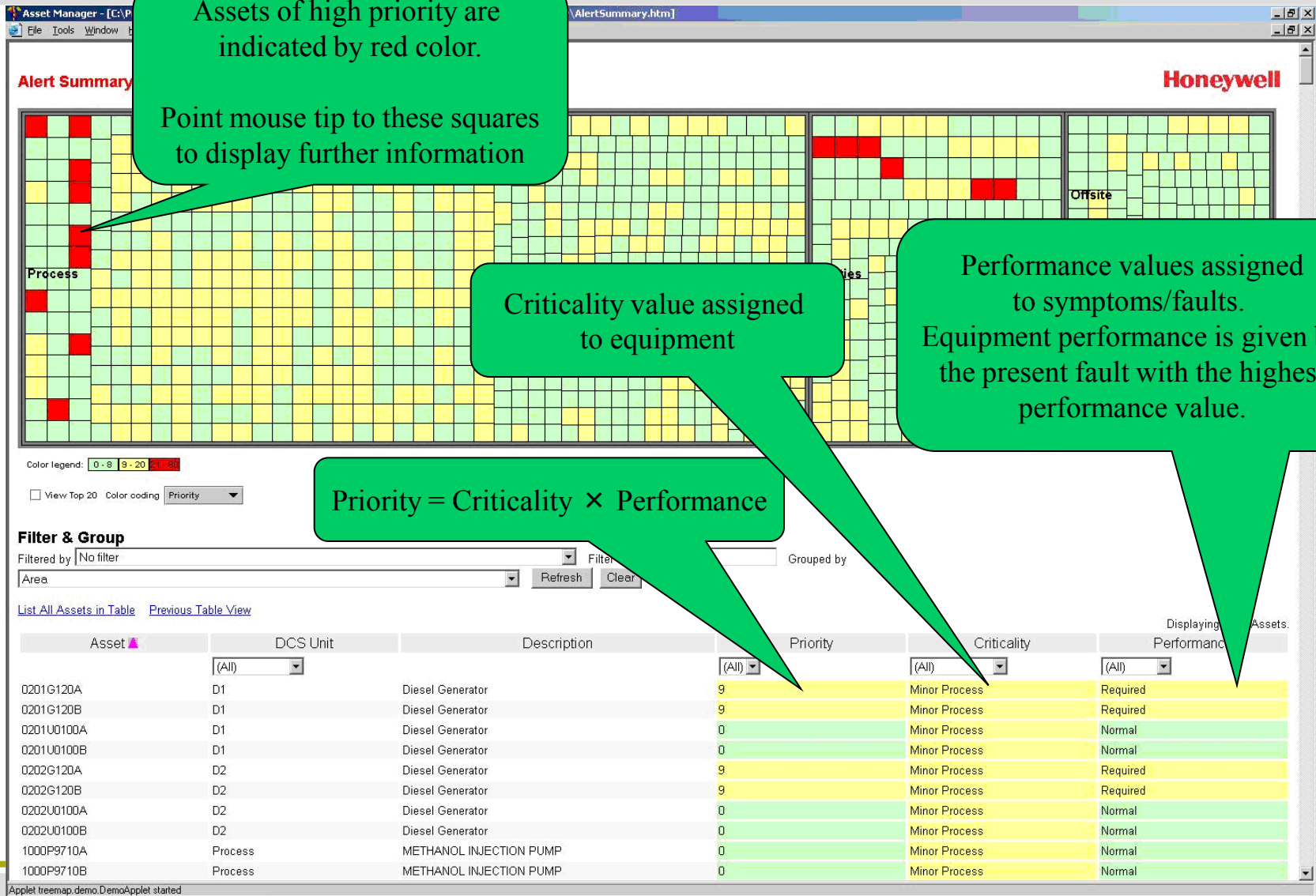


Rotating Equipment Frequency “Bad Actors”
Fixed Equipment Downtime “Bad Actors”

Enterprise Asset Mgmt Work Stream & Relationships



Example from Dolphin Energy Ras Laffan



Assets of high priority are indicated by red color.

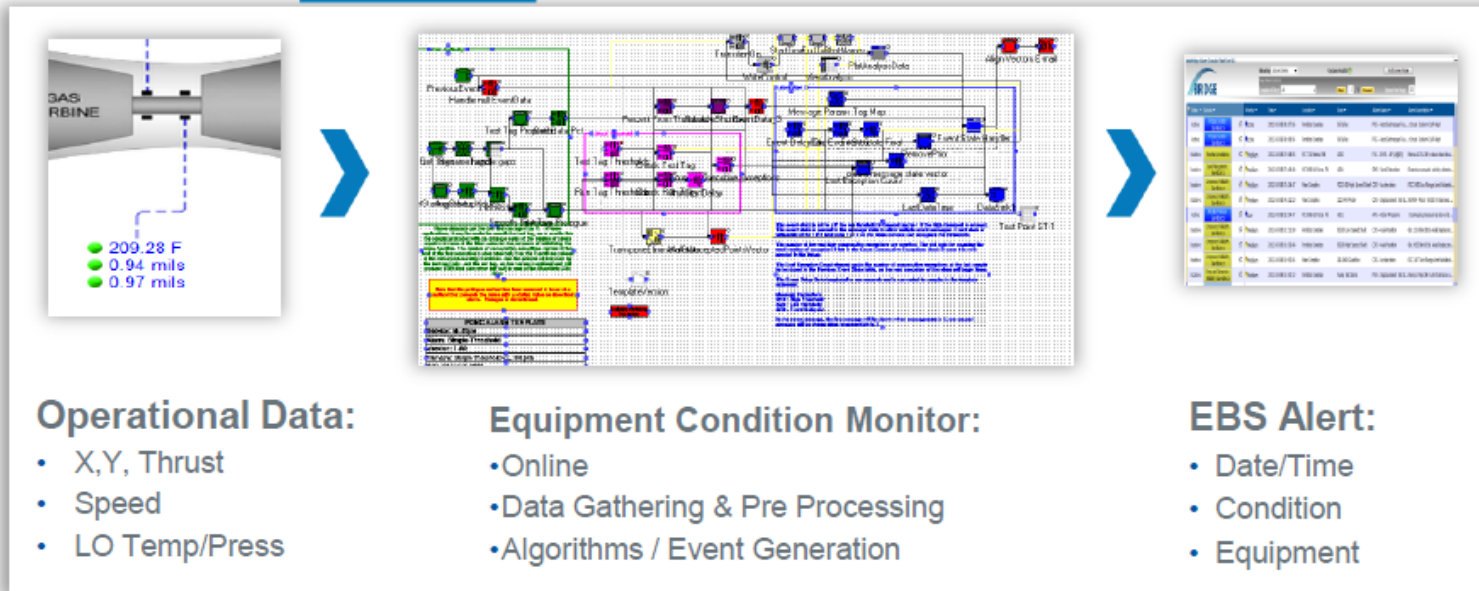
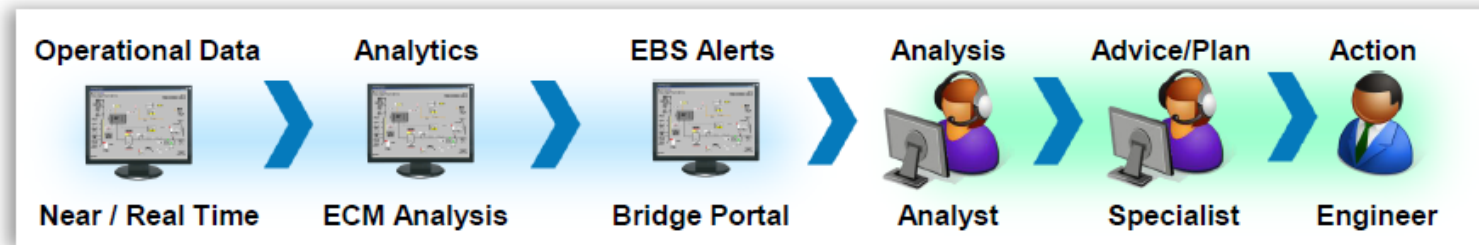
Point mouse tip to these squares to display further information

Criticality value assigned to equipment

Performance values assigned to symptoms/faults. Equipment performance is given by the present fault with the highest performance value.

Priority = Criticality × Performance

Bridge Surveillance Business Process





EHM – HMI Overview Screens



Mobile Equipment Monitoring (MEM)

- Data Access (wireless)
 - Alarm data
 - Sensor Data
 - Other vehicle systems – Tire, Lube, Fuel, GPS
- Monitoring Functions
 - Equipment Health
 - Operator Performance
 - Production
- Alerts & Notifications
 - Standard & custom/user defined 'rules'
 - E-mail notifications
 - Alarm Viewer & Alarm Help
- Trending & Analysis
- Reporting
 - Performance
 - Bad Actors

