# React to Information in Real Time for Maximum Impact to the Bottom Line

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www.nhp.com.au

WEA Conference June 18-19, 2014

# NHP Electrical Engineering Products

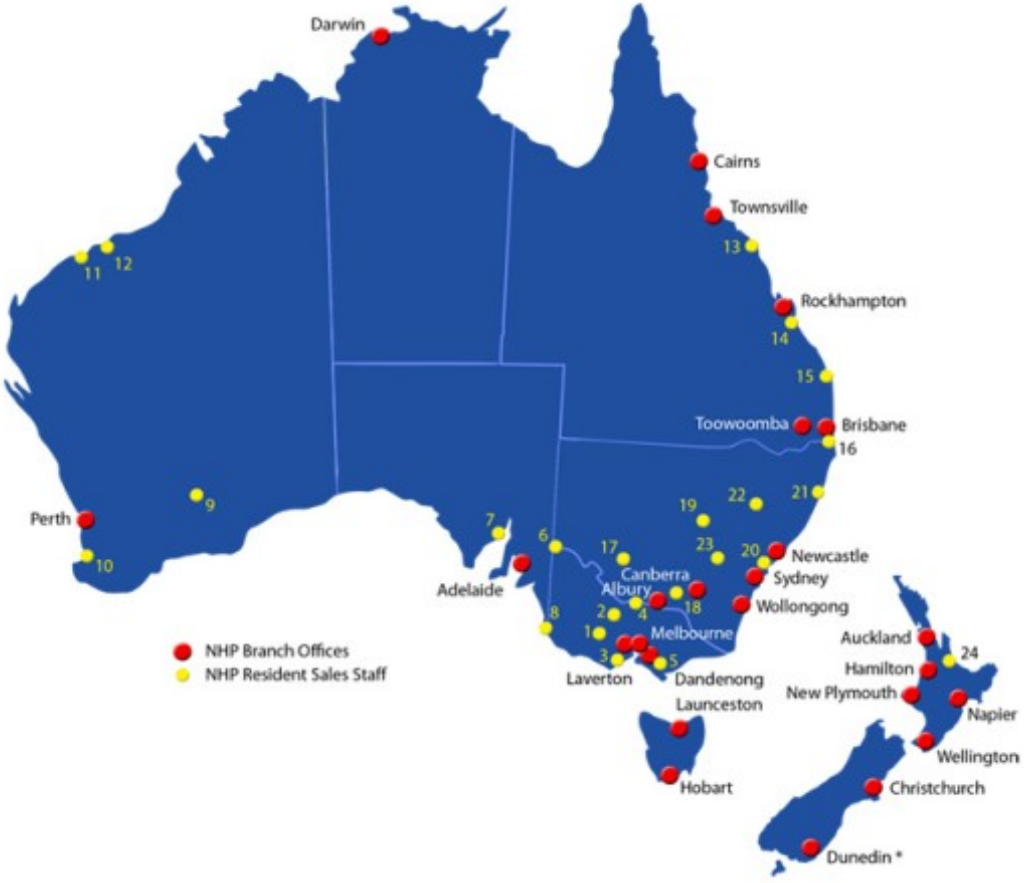
Established in 1968

49 branch & regional locations
across Australia & New Zealand

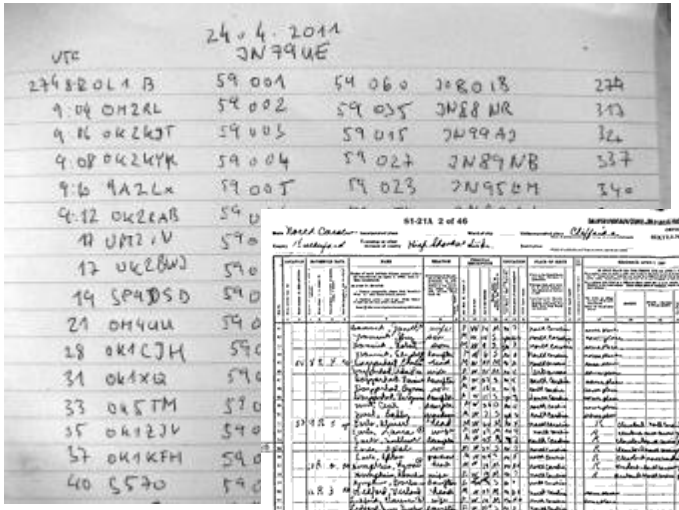
Around 850 staff

100% Australian Company

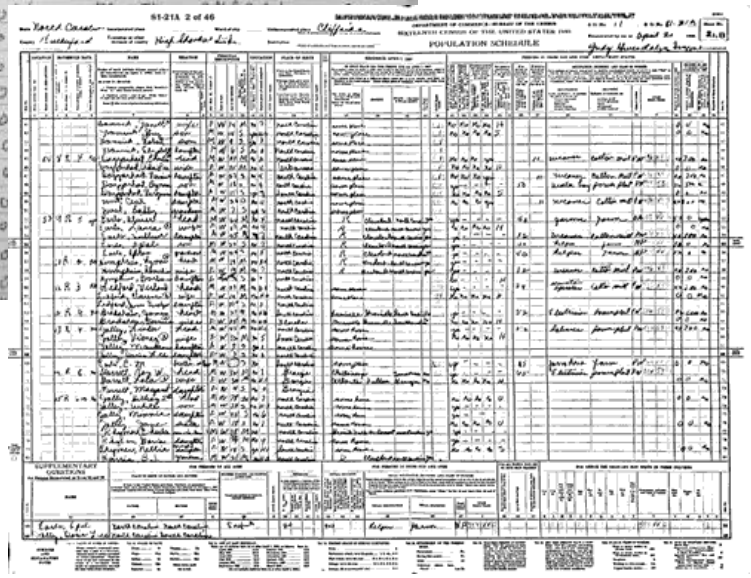
www.nhp.com.au



# Collecting data – The old way



Manually gather the data



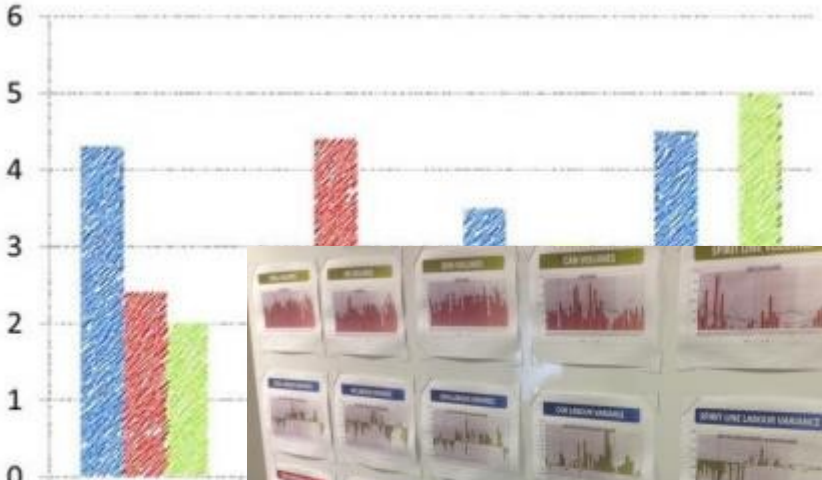
Multiple sources of data

More data you want to collect

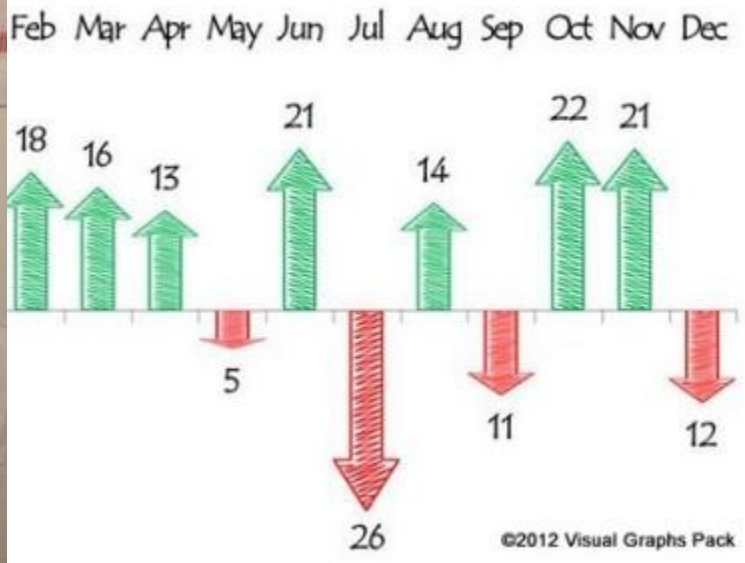
= More resources (people, time etc.)

# Collecting data – Next

Collate the data



Display the data



# Collecting data – Then

Make business decisions on that data

# Collecting data – Finally

Storage of data

How much do you keep?

# Collecting data – The old way

Is the data we are collecting accurate?

Nobody wants “their data” to look bad (human nature)

Are we collecting enough data?

Are we collecting the right data?

How old is our data?

Can we really impact our business with old data?

# What is Real Time Data

**Real-time data** denotes information that is delivered immediately after collection. There is minimal delay in the timeliness of the information provided. Real-time data is often used for navigation or tracking.

Some uses of this term confuse it with the term dynamic data. In reality, the presence of real-time data is irrelevant to whether it is dynamic or static.

(Wikipedia)

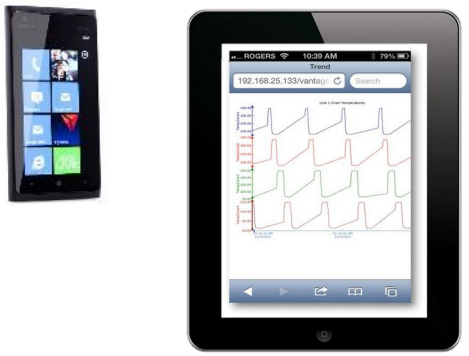
# Our Experience and Expectations

- We all have a smart phone or device
- We know what it is capable of doing
- You can…
  - Search for places to eat
  - Get directions
  - Check on the latest score
  - Read and send e-mail messages
  - Instant message a friend (or group of friends)
  - Receive Facebook notifications
  - Watch videos

# Image if …

Current Shift Top 10 Downtime with Reasons
System Overview - Plant Status
System Overview
PreMix 1
Reactor 1
Reactor 2
Storage Tank 1
Storage Tank 2
Steam System
Reports
Boiler PID Report

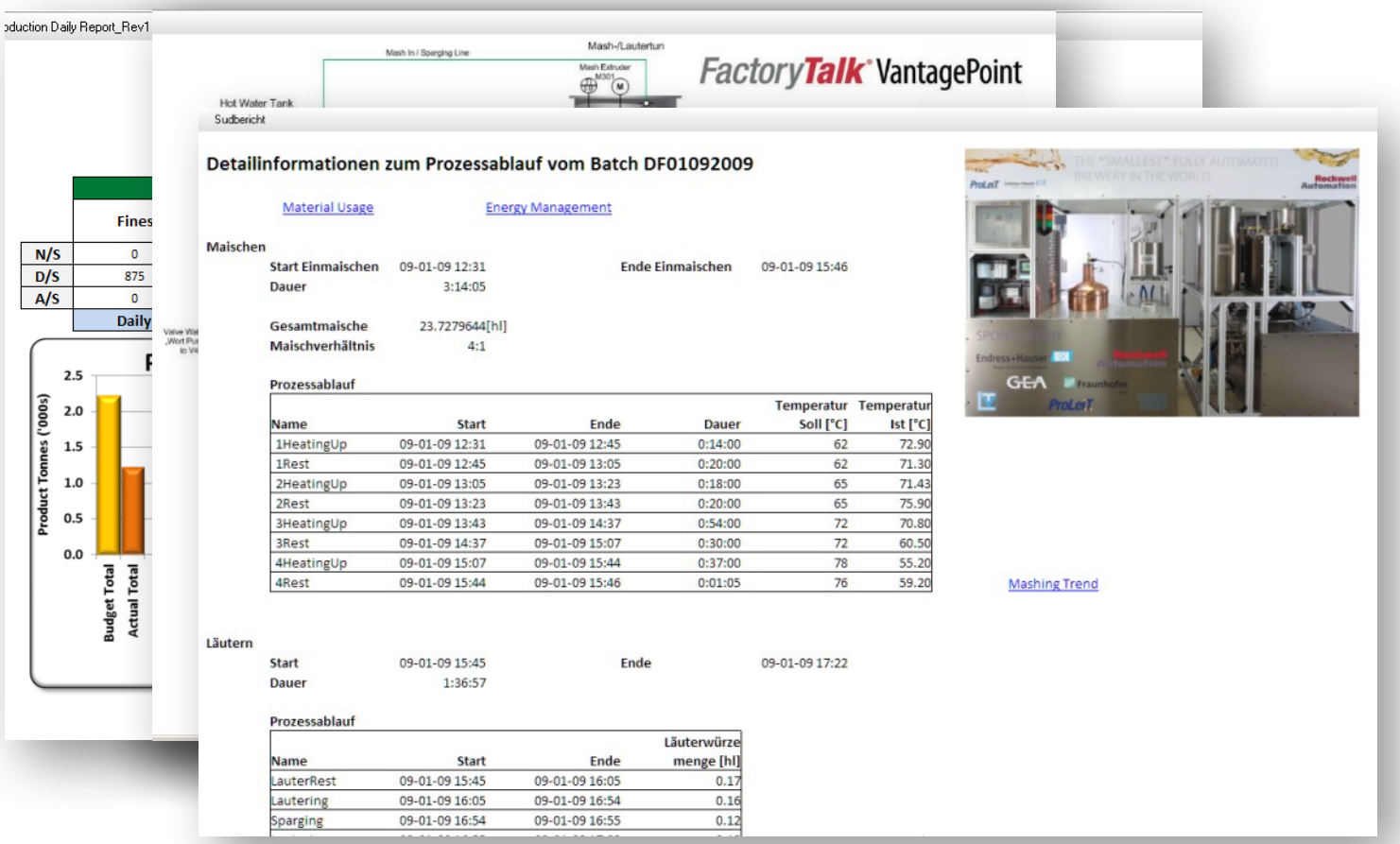
VantagePoint EMI
Drill Speed
26.79
Barrels per Hour Production
43
Well 1 Naptha
63.62
Drill Speed for Platform 2
63.68
Barrels per Hour for Platform 1
47
Shows Naptha Levels for the KPI
19.96



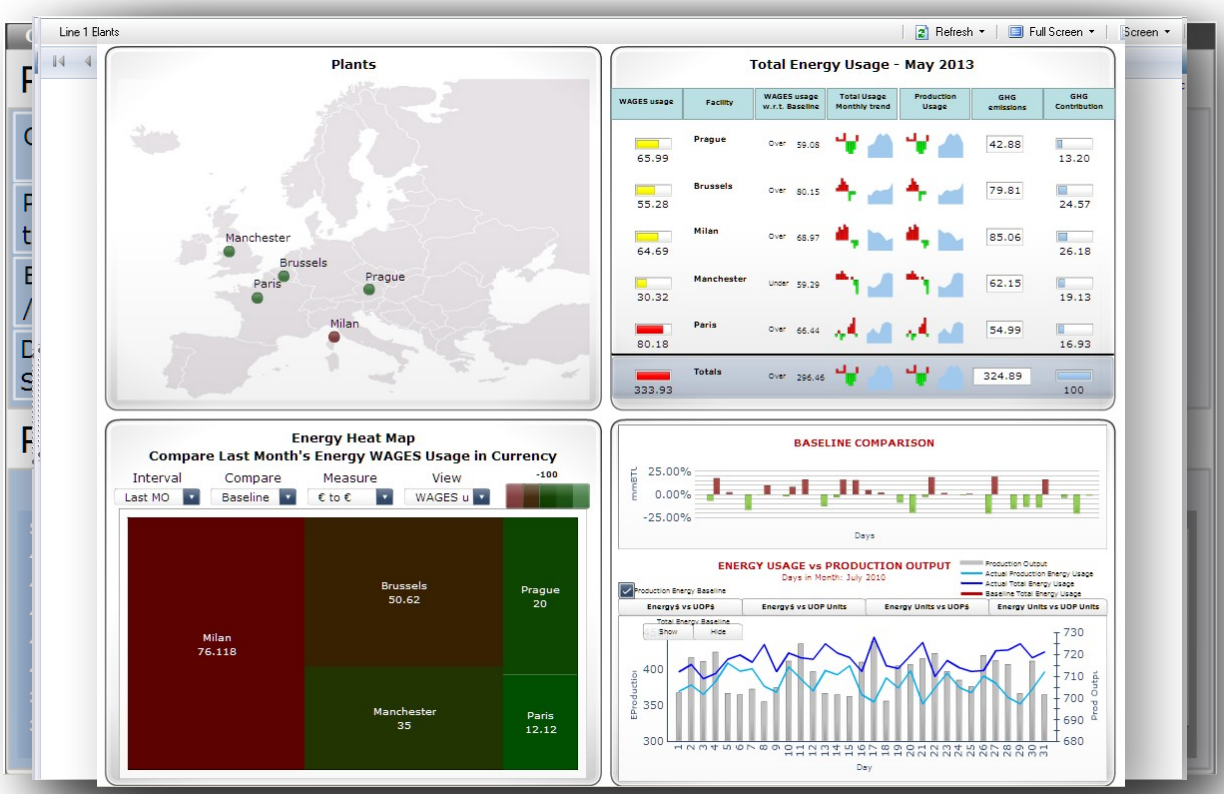
MOTOROLA

# Platform support

# What data do we really want



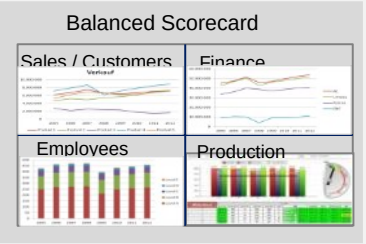
# Different types of data



# Different Users, Different Needs

**Plant**

**Plant Manager**




- Define Corporate objectives & observe actively
- Costs, production output, overall efficiency
- Financial indicators, capacity

**Production**

**Production Manager**

- Production output, achieving targets
- Efficiency of production

**Quality & Operations**

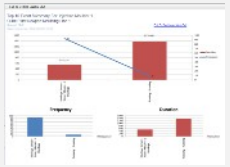
- Ways to improve production and yield
- Minimize scrap & rework
- Monitor process, ensure compliance

**Maintenance**

- Reducing downtime
- Preventive maintenance

**Area Line Machine**

**Engineer**



- Keeping plant running
- Predictive maintenance
- Optimize asset availability

**Operator**

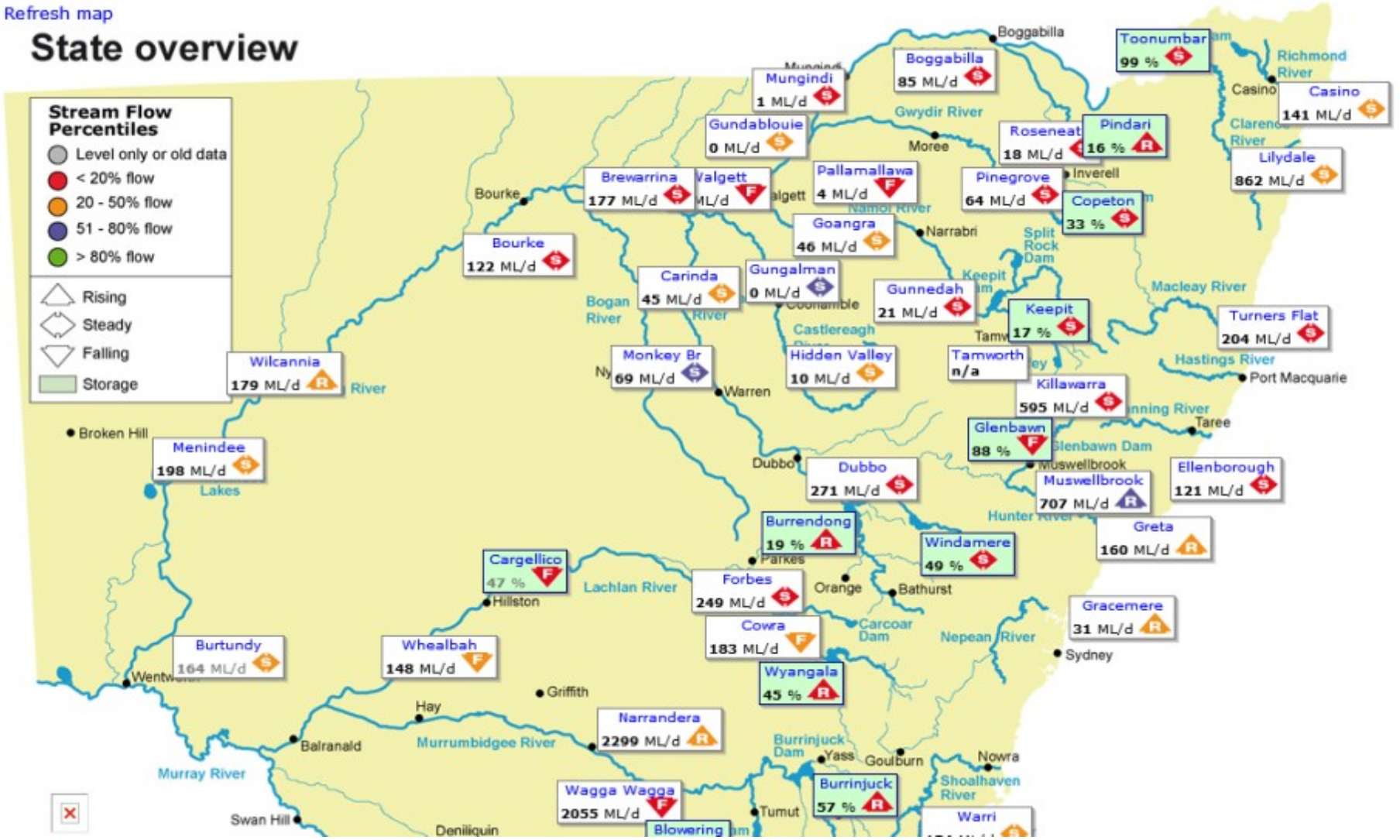
- Monitoring process to keep production running
- Identifying problems in real time
- Improvement activities

- Document effects of improvement activities

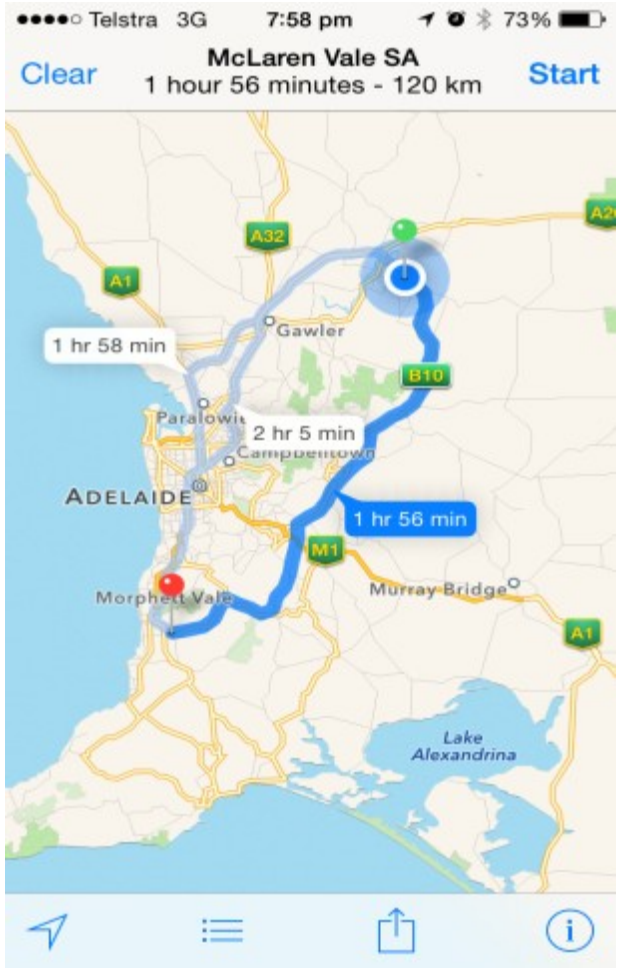
# Putting data together

# Real time information

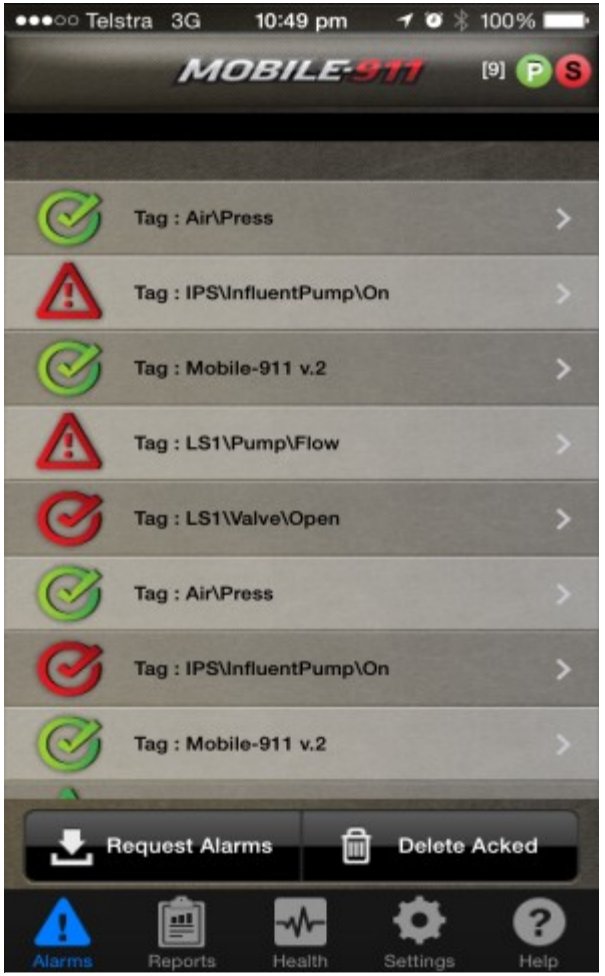
http://realtimedata.water.nsw.gov.au/water.stm



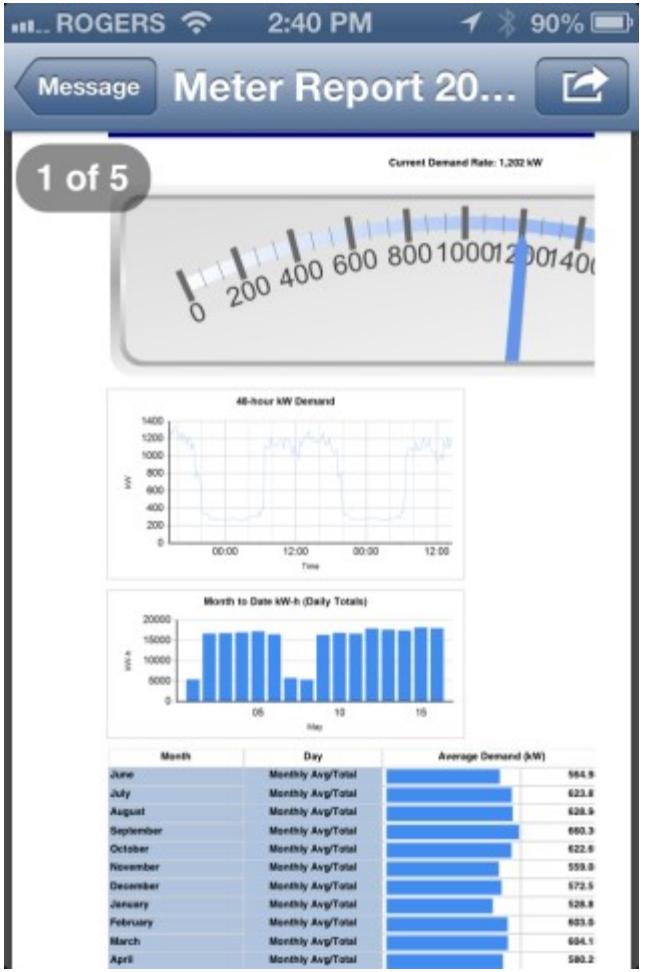
# Real time information




Navigation




Alarm Monitoring




Email / Energy Monitoring

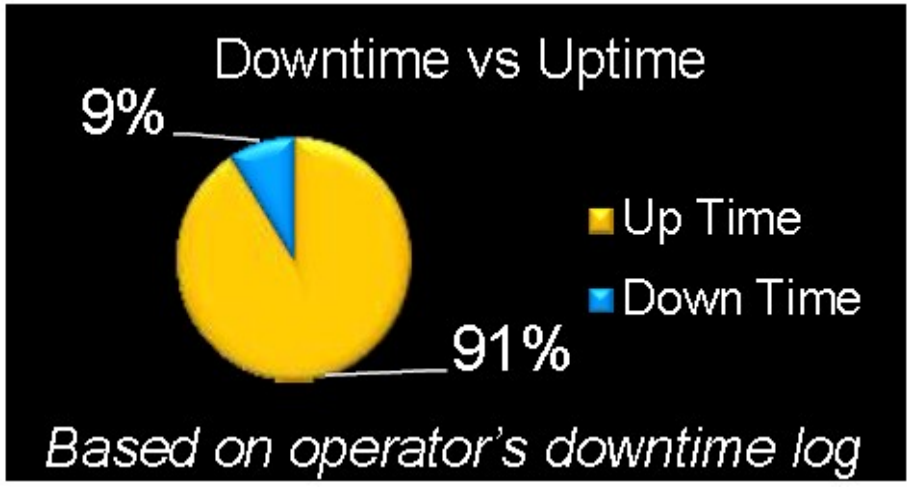
# Show how can we improve

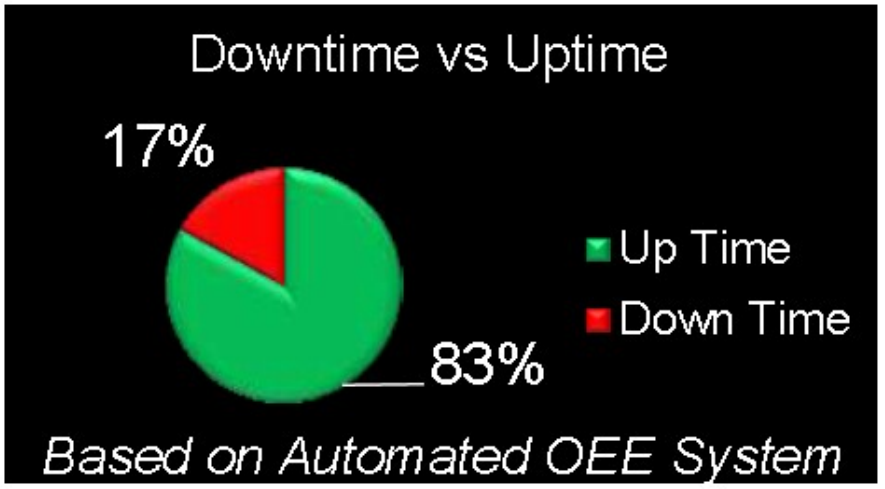
CUSTOMER EXAMPLE

Improve utilisation and throughput by 5%

Improve life machine life and utilisation

Accurate, real time and reliable data



# Show how can we improve

<u>CUSTOMER EXAMPLE</u>

Costs - Pilot $5k, Project approx. $70k

Savings – future projects $40k/yr, $250k Overhead absorbtion

15% improve in changeover times

OEE up from <15% to <95%

| Line | Uptime % | Throughput % | OEE % |
|---|---|---|---|
| 190 | 97.00% | 96.83% | 93.92% |
| 192 | 77.75% | 116.76% | 90.78% |
| 758 | 88.72% | 93.20% | 82.68% |
| 193 | 81.21% | 100.05% | 81.26% |
| 191-02 | 97.97% | 73.16% | 71.68% |
| 896-01 | 82.86% | 76.70% | 63.55% |
| 757 | 66.26% | 94.37% | 62.53% |
| 191-01 | 71.12% | 68.95% | 49.03% |
| 896-02 | 77.35% | 62.64% | 48.45% |
| 895-01 | 31.38% | 70.24% | 22.04% |
| 895-02 | 25.08% | 80.95% | 20.30% |

# Summary

More accurate data = More accurate decisions

Is the data you collect now the right data?

Have we got the right data to make decisions with?

Does everyone use the data?

Is the data presented clear?

Think about how we use the data

# Thank you