

Smart Services



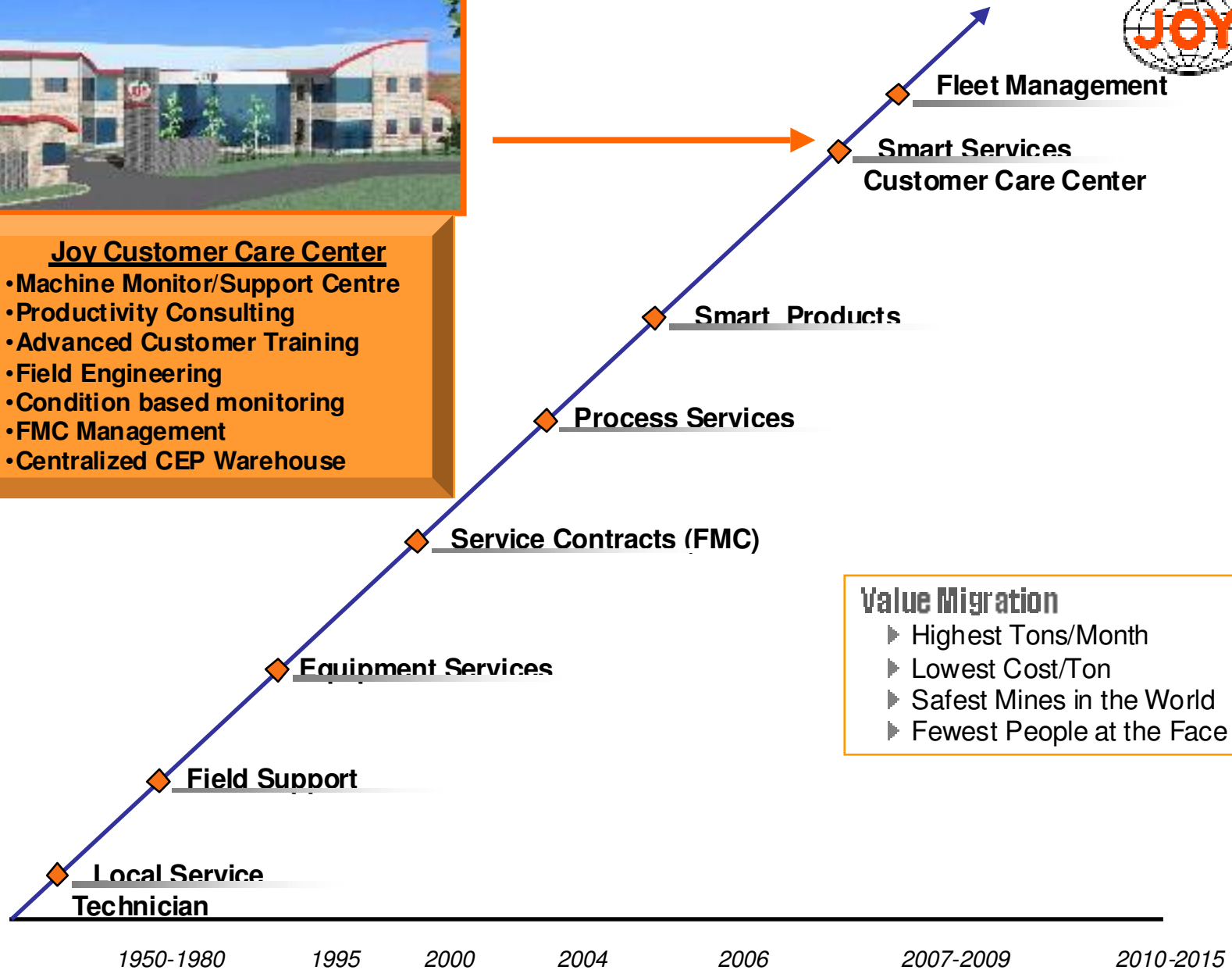
Ben Snyman
Manager, Engineering Operations
Joy South Africa





Joy Customer Care Center

- Machine Monitor/Support Centre
- Productivity Consulting
- Advanced Customer Training
- Field Engineering
- Condition based monitoring
- FMC Management
- Centralized CEP Warehouse

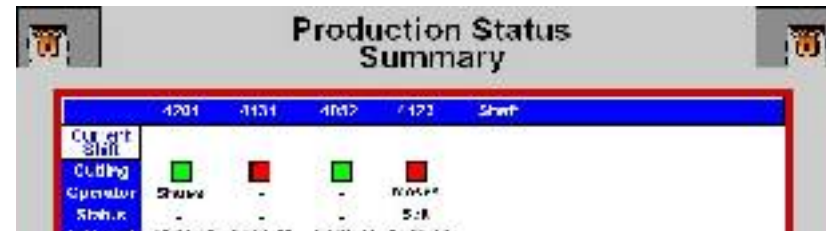


Machine Reporting Services Productivity Consulting

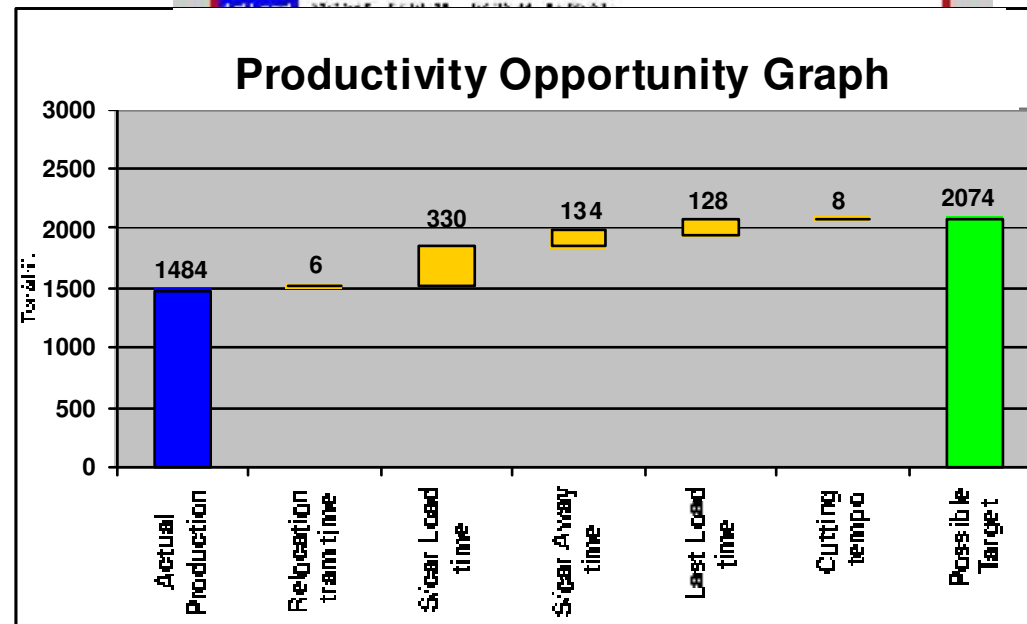


- New Release: JSRP Rev 4
 - Real time Production Pages
 - Tonnages
 - SC load time and away time
- Current Contract performance
 - 27 machine on contract
 - Expanding to 40 machines for 2008

- Presenting information from all shafts
 - Competition between sections
 - Able to relate to targets



- Additional Graphs
 - Traffic Light indications on performance
 - Lost opportunity identification



Production Timing Indication Light



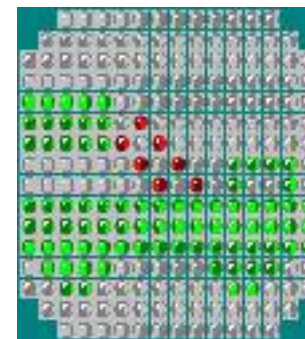
- Time Management
 - Sumping
 - Loading
 - Away
- Production improvement 19%
- Payback < 1 week
- 18 systems currently in operation
- 35 systems in operation end 2008



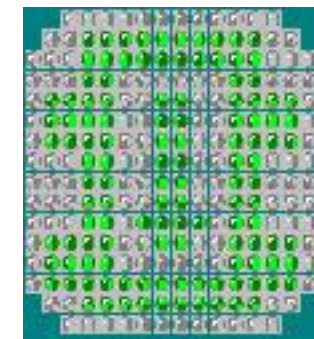
Sumping



Loading



Away



Smart Services



- Definition – Optimisation of assets
 - Through the integration of “machine intelligence” (real time data) for precise monitoring and control
 - Ensuring pre-emptive maintenance, equipment operation and process control
 - To achieve unprecedented system availability and efficiency

- Examples

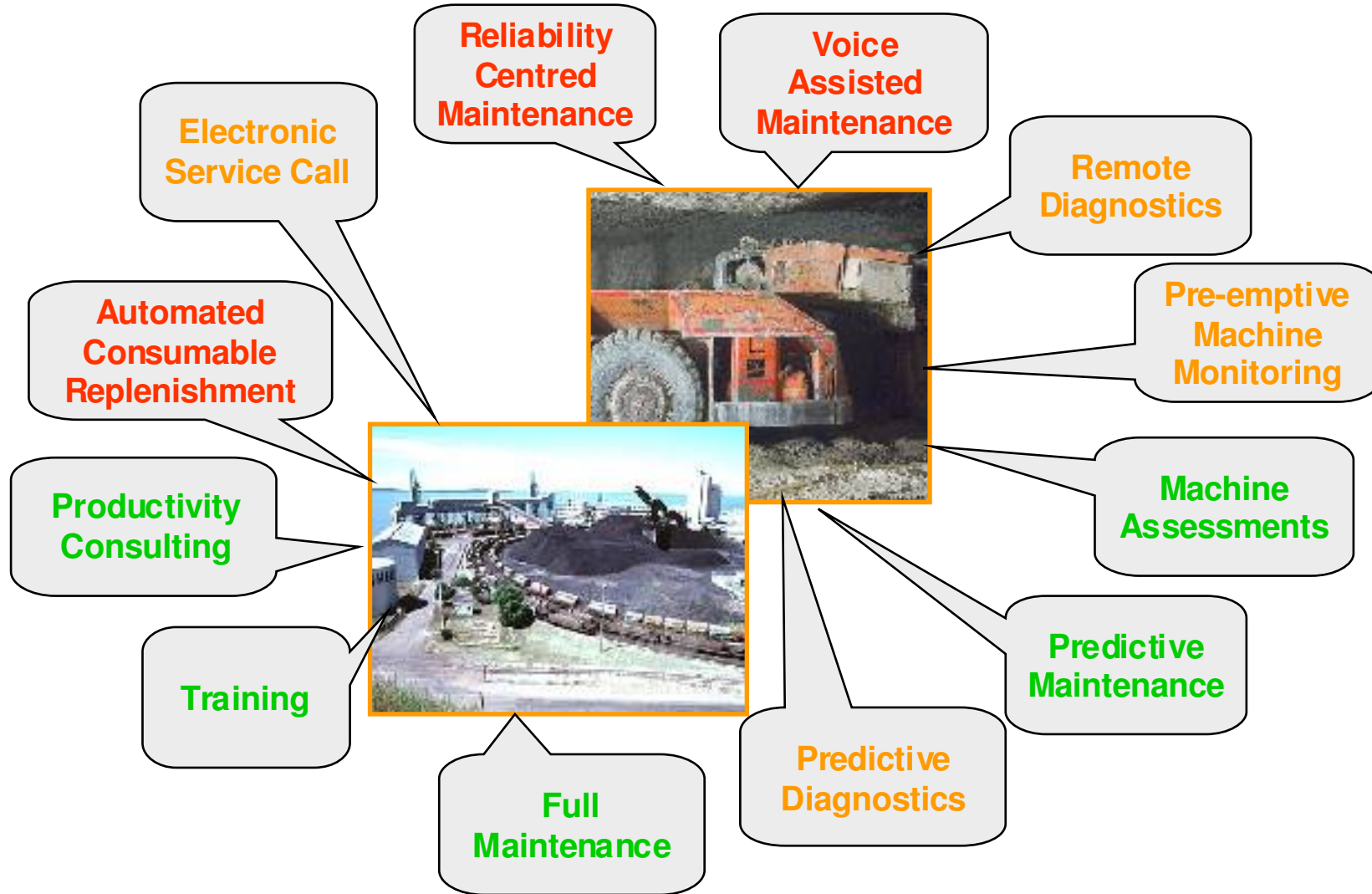
- Honeywell - Aerospace equipment
- ABB - Power Plant equipment
- Siemens - Medical equipment
- GE - Jet engines

Smart Services Value Blades



-
- Beyond purchase and installation and into Life Cycle Management

Smart Services Fleet Management



Monitoring and Support Centre Pre-emptive Support



080 CALL JOY

- 24/7 Pre-emptive Support
 - Satellite/RF Link-up to mine sites
 - Voice Assisted Maintenance
- Predictive Diagnostics on subs
- Productivity benchmarking
- Integrated Joy Support Centre (In-bound, Out-bound)
 - Customer order history on hand
 - Parts availability visible for dispatch
 - Service Engineering dispatch
 - On-Line parts books
- Fleet Management
 - Machine sub-assembly tracking
 - Integrated machine safety/info systems
 - Reliability Centred Maintenance



JOY MINING MACHINERY
FOR THE MINING INDUSTRY

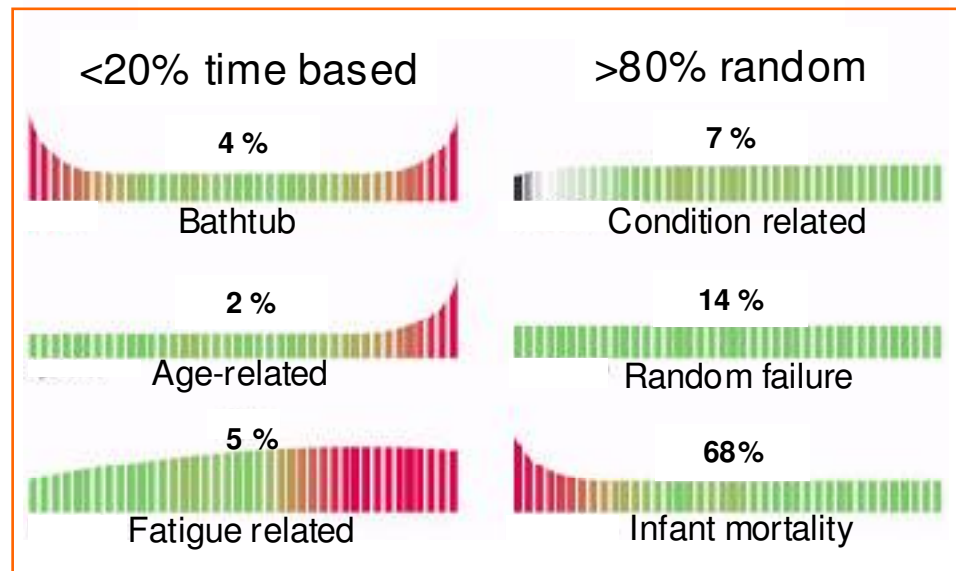
Reliability Centred Maintenance Pro Active Maintenance




- Solution “The right task at the right time with clear instruction”
 - Joy RCM program
 - Interface with asset management systems (SAP, Pi-log)
 - Integrated with the Machine Monitoring Centre to provide feedback and input for enhanced RCM practices

- Results

- Enhanced up-time
- Better parts/sub assembly planning for customer/Joy
- Better equipment evaluation and life expectancy tracking
- Design improvements on problems areas
- Inventory management



Customer Care Centre Partnership for Productivity Improvement





Support Centre
24/7 Customer support



Warehouse
FMC Support
Consignment spares

Field Engineering
24/7 customer support





RCM (P&H)
Advanced Maintenance
when required



Customer Care Centre

Training Centre
Computer based training
Virtual Reality training





Voice Assistance
RF/Satellite link, VOIP

Productivity Consulting
Expanding from 18-30
machines




Monitoring Centre
RF/Satellite link to mine
Remote Diagnostics

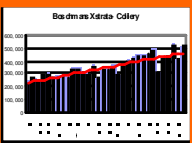


Consumables
Filters, oil, etc.
FMC support

Condition Monitoring
10% expansion
Restructuring contracts



Full Maintenance
Expanding contracts
new and existing



- Combining and expanding services to facilitate world class “Smart Services”

Smart Services Summary



- Benefits of Smart Services

- 24/7 pre-emptive support
- Productivity consulting
- Sub assembly management
- Advanced training
- Maintenance management



Customer Care Centre

- Smart Services role out

- Pilot approved for South Africa
- Facility Complete by end 2008
- Developing further enhanced services

World-Class Service Delivery
