



Process Improvement - Its Role within Asset Maintenance

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Premier Foods

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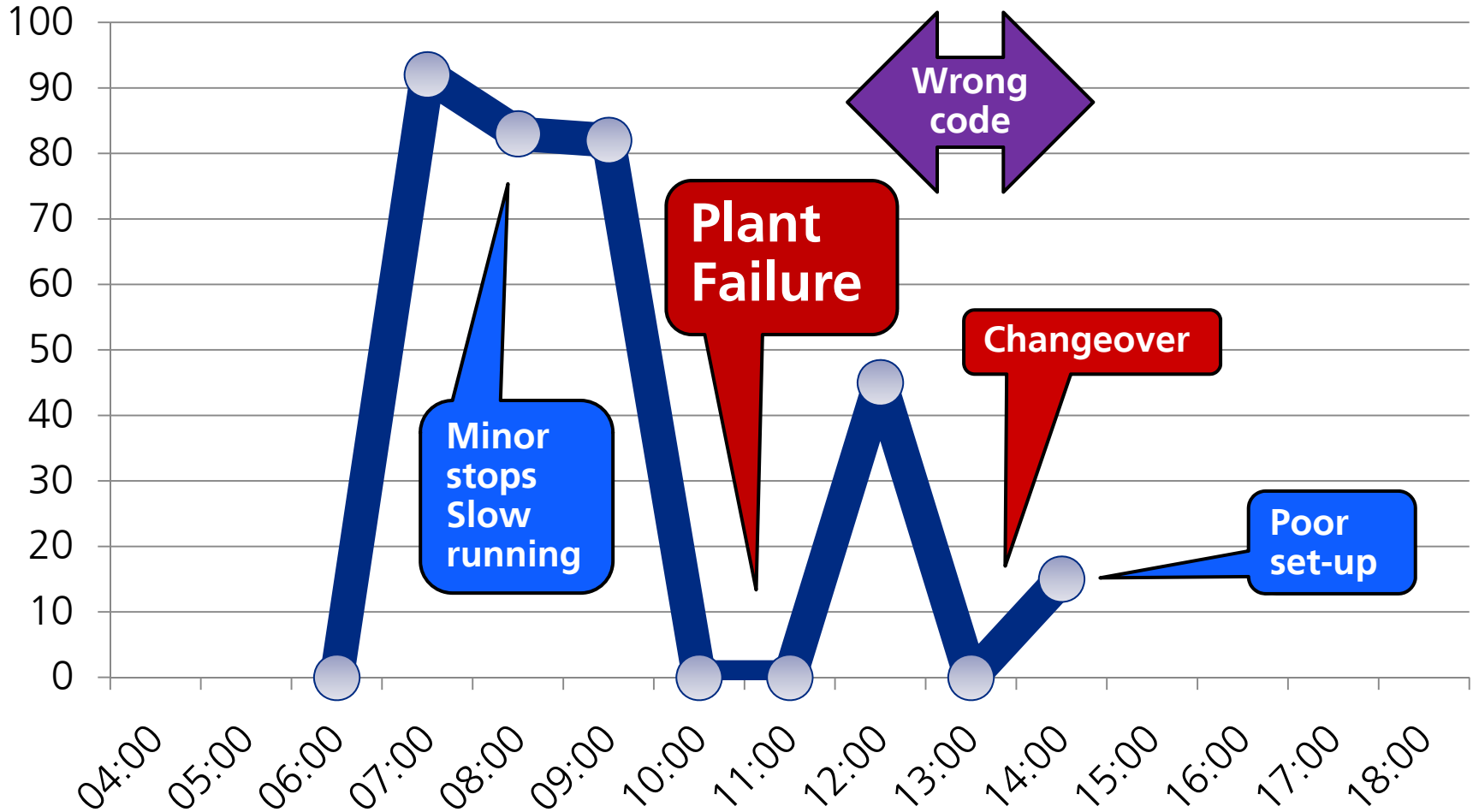
Maintec 2011, 11.00 - 11:45 Wednesday, 30th March

Agenda

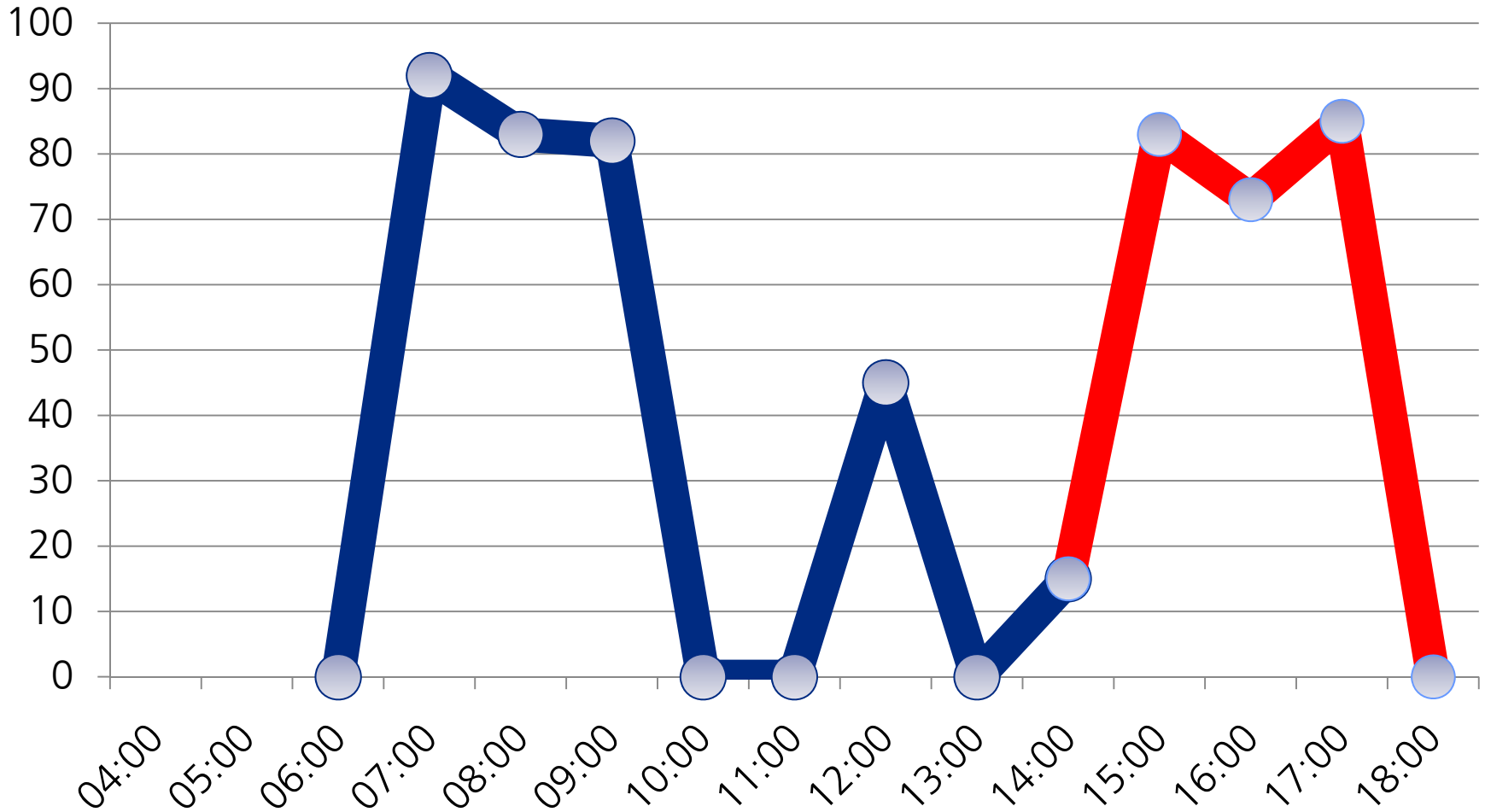
- ▶ Why Measure Anything?
- ▶ Overall Equipment Effectiveness
- ▶ Focussed Improvements
- ▶ The Premier Foods 'OEE Attack Loop'
- ▶ Any Questions



Why measure anything?



Extended Day



Extra Costs per Hour?

Per Hour	Five day Operation	Seven day Operation
£100	104,000	182,000
£200	208,000	364,000
£300	312,000	546,000
£400	416,000	728,000
£500	520,000	910,000

OEE Basics



168 hours

Scheduled Production Time

Availability 65%

No Mtls

Break Down

No Staff

Performance 67%

Slow Runs

Minor Stops

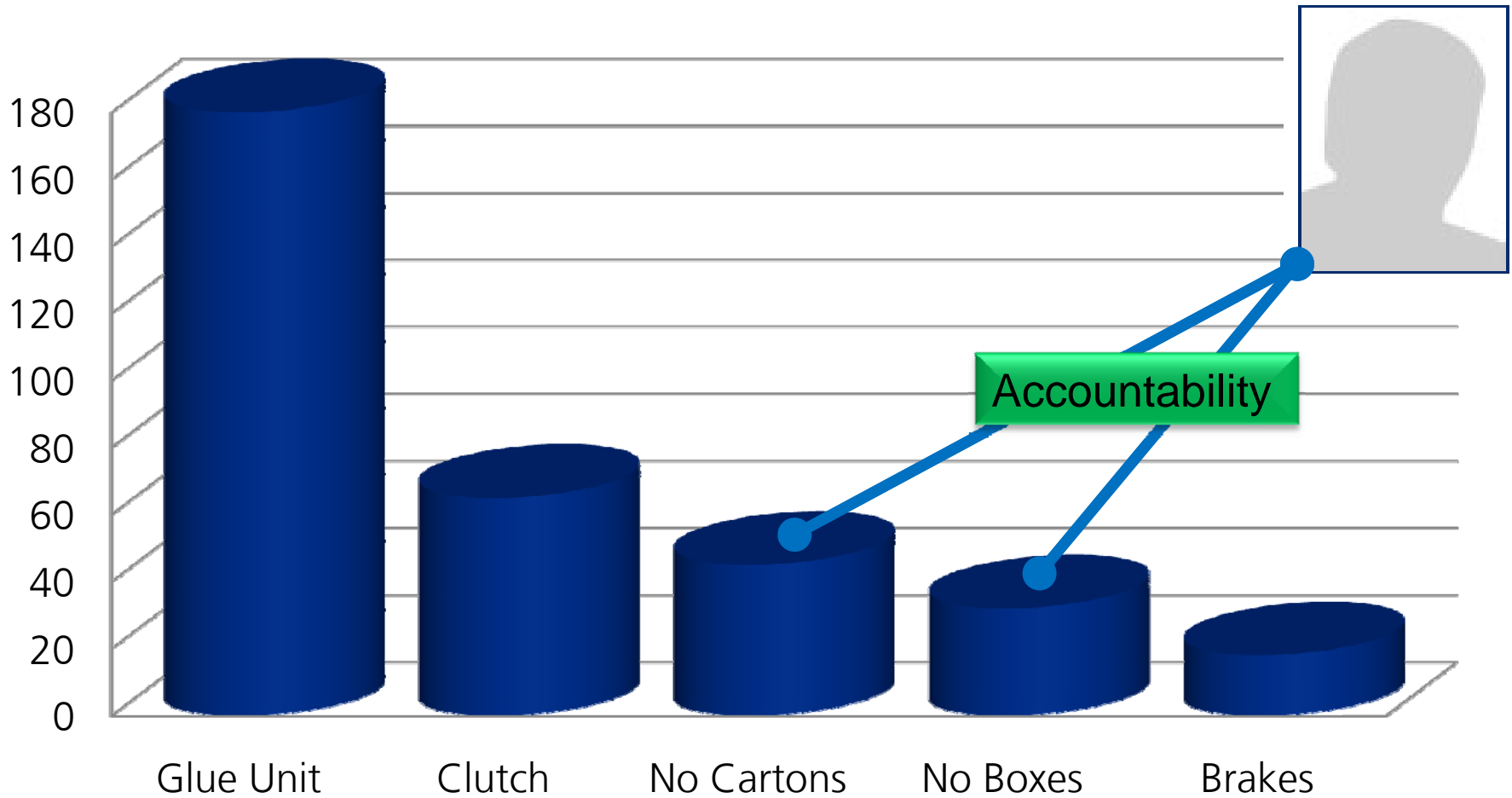
Quality 92%

Rejects

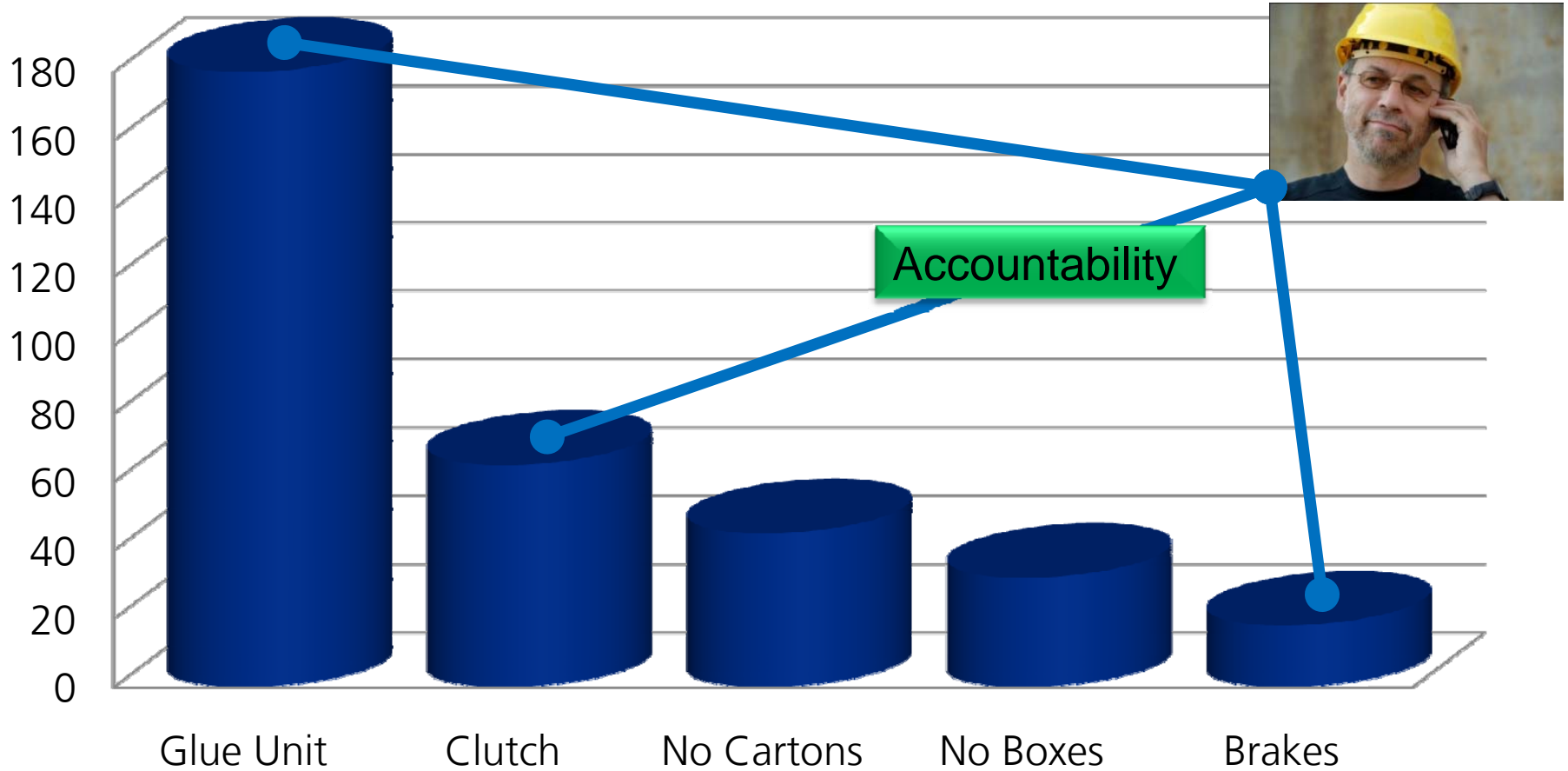
OEE 40%

£910,000 of WASTED EFFORT

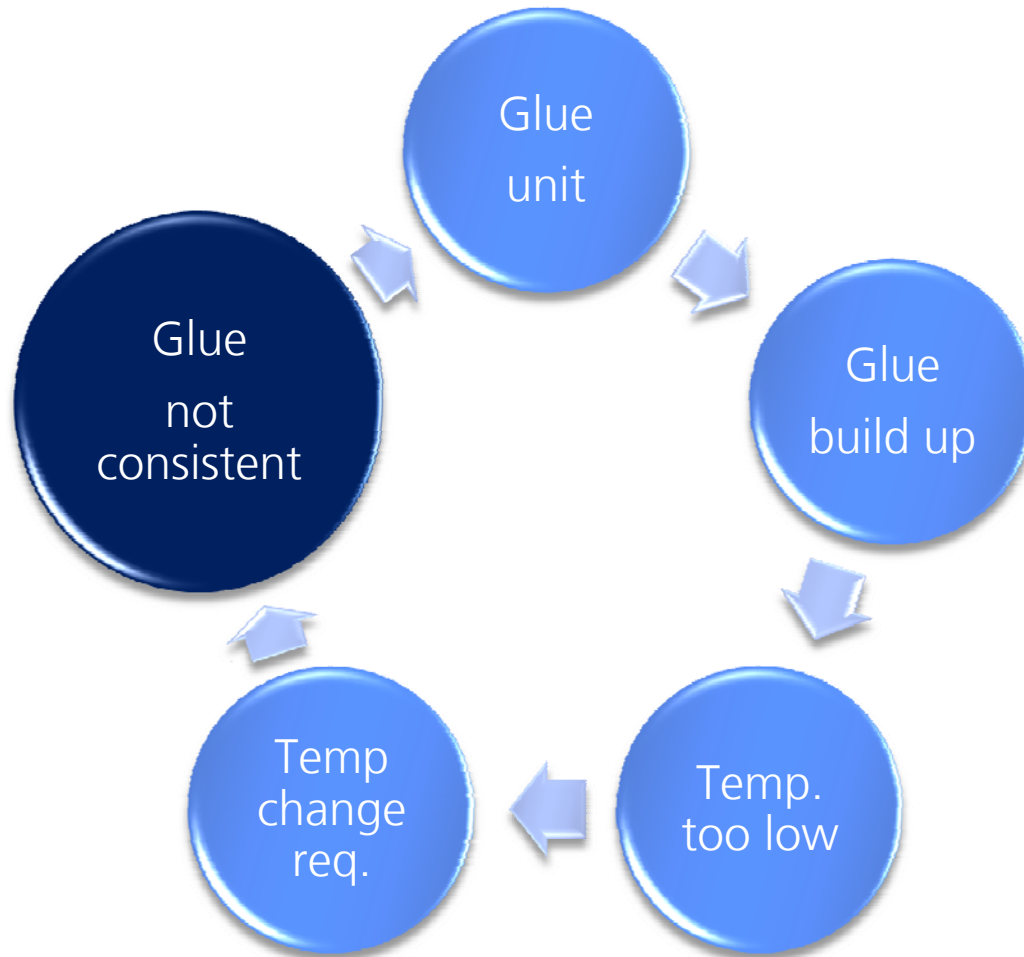
Top 5 Lost Time Reasons



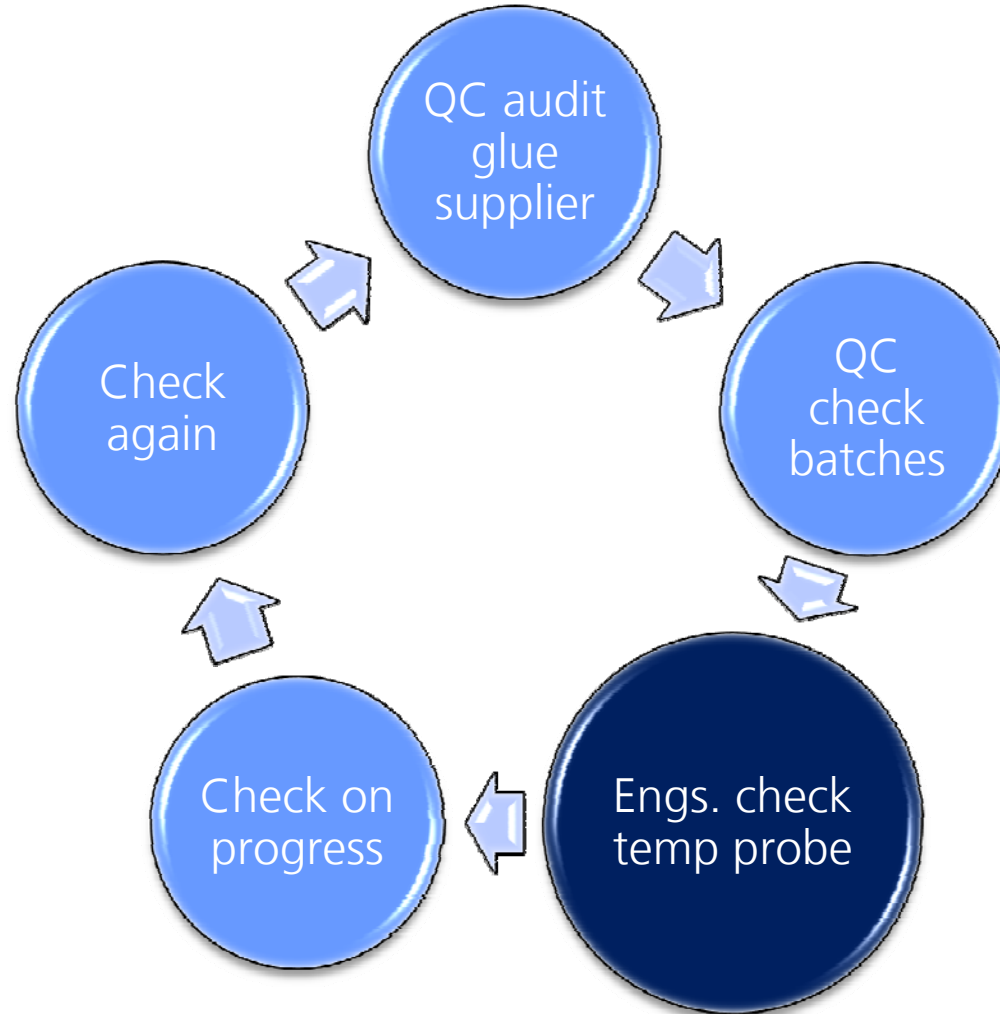
Top 5 Lost Time Reasons



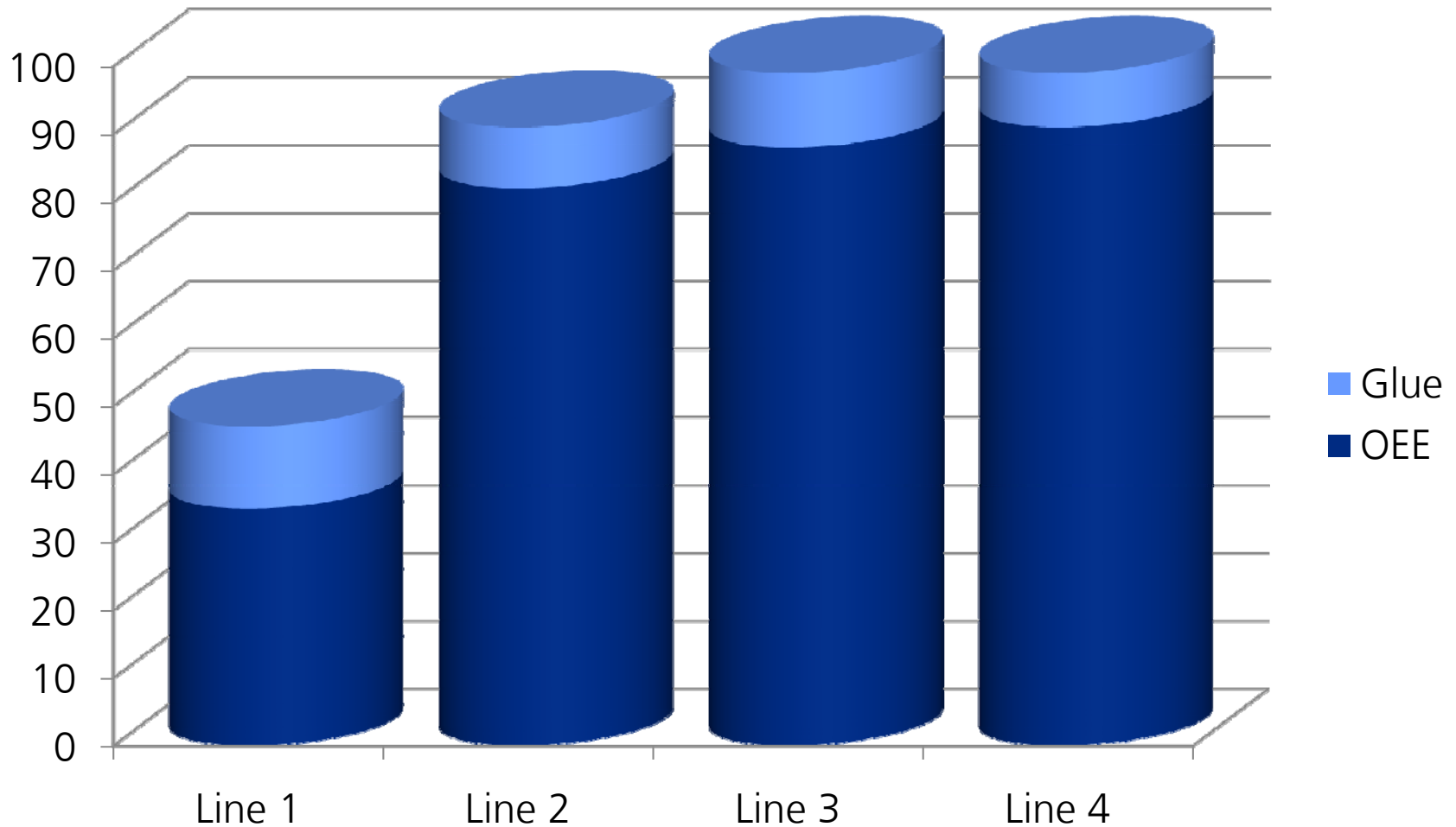
5 Whys



MMS Counter-Measures



Discover the impact



Potential Improvement

Asset Name	Availability %	Theoretical Availability %	Performance %	Quality %	OEE %	Theoretical OEE %
Line 1	61.42	86.07	53.05	97.03	31.61	44.30
		+ 25%				+ 13%
Line 2	92.86	97.62	101.03	98.05	91.98	96.69
Line 3	92.39	96.74	96.31	98.41	87.56	91.68
Line 4	94.85	98.97	92.32	98.14	85.93	89.67

What's the cash benefit?

OEE %	Units	Increased %	Increased Units	Extra Revenue
39.00	51,281	8.00	10,356	£ 7,637
40.00	52,575	9.00	11,650	£ 8,592
41.00	53,870	10.00	12,945	£ 9,547
42.00	55,164	11.00	14,239	£ 10,501
43.00	56,459	12.00	15,534	£ 11,456
44.00	57,753	+ 13%	+ 16,828	+ £12,411
45.00	59,048	14.00	18,123	£ 13,365
46.00	60,342	15.00	19,417	£ 14,320

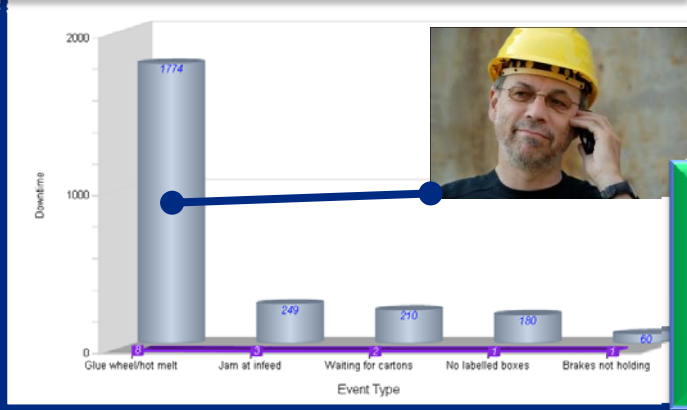
Best of Best Targets

Time Range	Availability	Performance	Quality	OEE
Week 01	74.74	72.11	97.73	52.67
Week 02	80.95	58.00	99.84	45.26
Week 03	94.67	46.31	99.85	43.77
Week 04	96.53	43.53	99.84	41.95
Week 05	97.04	57.49	99.18	55.33
Week 06	97.33	57.72	98.46	55.31
Week 07	98.00	38.19	97.70	36.56
Week 08	98.50	42.50	97.73	40.92
Week 09	95.89	47.32	97.53	44.26

Best OEE	Best of Best OEE
55.33	70.92

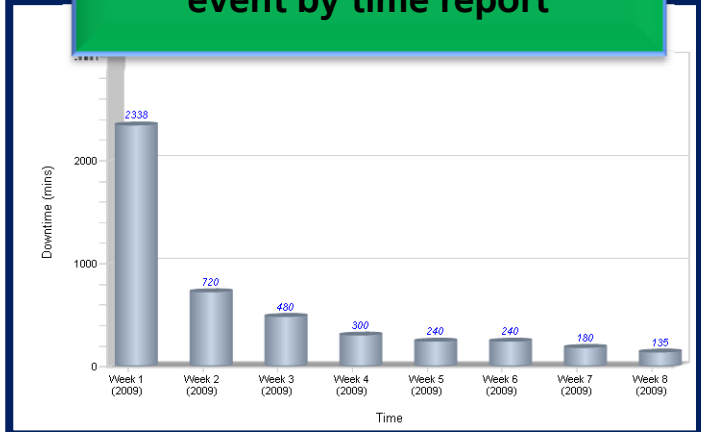
Focussed Improvements

1. Generate the Top 5 Losses Report



2. For each loss: identify an accountable individual

3. For each loss: generate an event by time report



4. Create an improvement plan, review & record progress weekly

	Improvement	Asset	Status	Priority	Created By	Date Created	Target Finish Date
⏸	Audit Glue Supplier	Line 01	Waiting	Normal	C.Bischeim	02/12/2009 ...	31/12/2009 ...
✅	Engs check glue sensor	Line 01	Completed	Normal	Lars.Anderson	02/12/2009 ...	04/12/2009 ...
▶	QC check glue batches	Line 01	In Progress	Normal	Lars.Anderson	11/11/2009 ...	31/12/2009 ...
▶	Reduce glue stoppages	Line 01	In Progress	Normal	Alan	02/11/2009 ...	31/12/2009 ...

The Premier Foods C.I. Process



The Premier Foods C.I. Process



Over to Graham Paterson...