

Optimising Automated Systems

Many automated systems are failing to deliver the operating efficiencies that they could.

There can be a number of reasons for this:-

- System was never fully optimised for the task due to design/contractual/cost issues at time of implementation.
- System not fully utilised due to operational planning or system knowledge.
- Design parameters no longer match the operational requirements.
- Systems in part or overall not fit for purpose.
- Systems utilise out of date, sub-optimal technology.
- Poor availability due to repetitive faults, sub-optimal maintenance, support and MMI/ SCADA.

Going back to the supplier may be required but may not be the best first route. Why?

- If they got it wrong the first time then they may do again. They may need guiding to the requirement and you may need expert advice.
- An expert, independent overview delivers clarity.
- They may not market the optimum solution.

Asking other suppliers can be difficult in the first place.

- They may be cautious about the risk and opportunity.



**The Polygon Partnership Ltd
Consult - Design - Specify
Engineer – Implement**

- Logistics Analysis
- Data Analysis
- Simulation
- Warehouse Design
- Systems Optimisation

Storage and MHE
Receiving automation
ASRS pallet and mini load
Conveying Systems/ AGV
Automatic replenishment
Order Fulfilment
Automated picking
Sortation
Roll cage automation
Robotics
WMS, WCS, MMI Scada
PTL, Voice, RFID

At PPL we combine over 50 years experience with leading edge capabilities.

We know what works and how to design systems that deliver.

We will analyse your business, recommend the way forward and manage the change.

Engineering Performance

Typical Role

We will work with you on a daily fee basis or to a fixed agreement.

We will work with your internal team to set the parameters, scope and construct a requirements document.

We will agree with you any data requirements, internal team and supplier interface.

We will set a program for deliverables.

We will submit a recommendation report with relevant technical objectives, design detail and cost budgets.

We will prepare a tender document.

We will evaluate submissions and manage the implementation.



Typical elements for systems optimisation can be:-

- Equipment **machine** capacity as a ratio of required **performance**.....
- Peak operating conditions.....
- System operating balance – bottlenecks.....
- Systems resilience.....
- Inability to handle efficiently the range of product formats required....
- Operator performance.....
- Inflexible solution not adapting to new operating conditions.....
- Up time availability.....

Typical Solutions

- Re-engineer
- Smoothing/ buffers
- Simulation/design
- Fallback engineering
- Manage/define/size
- Tools/ergonomics
- Re engineer solutions
- Fault/ support mgt

Case Study – Business in the fast lane

In 2005 a major European retailer expanding with one store opening per day urgently needed to raise the level of capacity on key systems in its main 100,000m² warehouse by 60% for its peak period starting in September. **PPL** were asked to review and define what could be done to meet the target. By establishing a combination of enhancements, resilience routing, systems changes and operational changes the £2m project was implemented on time.

The client then extended the brief to define the overall systems and design to maximise storage and throughput to quadruple the original systems capacity in the next 2 years. This was completed by the end of the year and contracts placed for over £25m with suppliers.

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