Digitalising Manufacturing 2017

Skills & Training
MTC Coventry, October 30 – 31, 2017

Advancing. Manufacturing. IT.
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MESA International
• Instructor Global Education Program (GEP)

Manufacturing Operations Management Institute
• President and Senior Consultant

- Smart Manufacturing Strategies
- Standards: ISA-95, ISA-88, B2MML, ISA-62443, ...
- Continuous Improvement

- Awareness
- Business case
- Architecture Blueprint
- Selection
- Roadmap
- Cash the benefits
How MESA Delivers

MESA International: Building bridges-of-understanding from plant to the enterprise

Peer-to-peer

Point-of-view

Global education program

Speaking wit the voice of the industry’s practitioners
Moving Beyond Industry 3.0

• The manufacturing industry is changing: Big Data, IIoT, I4.0, ...

• Manufacturing organisations will not become self-organising without achieving manufacturing excellence by utilising Manufacturing Execution Systems (MOM) first.

• The MESA GEP program explores subjects such as:
  – Strategic Initiatives and how manufacturing operations standards help to realise them successfully
  – The metric framework for Enterprise Manufacturing Intelligence (EMI)
  – Justifying MES/MOM systems to business leaders, business case justification and Return on Investment (ROI)

New technologies: yes!

But: People are still making the difference!
Challenges ...
Challenges …

- MES/MOM is NOT an IT project
- It should be owned and driven by business
- It should address:
  - Processes
  - Organisation & governance
  - People’s skill sets
  - IT / technology
- Change management is key!

Eva Linstroem: Many are not yet prepared for the 4th industrial revolution, they often are still struggling with the 3rd one. We need to educate people!
Journey to Smart Manufacturing

To-do List: Manufacturers get started
1. Review business structure for future market strategy
2. Establish evolution milestones for the journey
3. Nurture new culture around new vision
4. **Address skills gap for knowledge workers**
5. Build partnerships to support the new vision
6. Evolve the IT infrastructure (MES/MOM foundation)
7. Be willing to try out different strategies, even if that means risking losing money.

The ones that succeed will be the ones prepared to try out new ideas!
Manufacturing Technologies Centre

Digitalisation
Introduction: Siemens Congleton

Olivia Kelly
Engineering Apprentice
Research and Development: Type Test

Rhys Griffiths
Engineering Apprentice
Congleton Repair Centre

At Siemens Congleton we produce Frequency Inverter Drives.
Digitalisation in the JF: What We Do

- This department is ran solely by apprentices
- Manage a cell that builds fans for Congleton Drives
- Manufacture the new generation of packing systems; Pick-to-light.
Objectives: Why Did We Do It?

Benefits and opportunities:

• Teaching us how a factory works and the behind the scenes
• The pressures of being in the manufacturing business; the repercussions of failing
• Collaborating with other departments; seeing their advantages and restrictions
• Preparing for Industry 4.0.
• Small aspects of I.4.0; CAD and 3D printing
• Introducing finance; CAPEX
Issues and obstacles: Traditional Method

- Running at 80% fans and 20% digitalisation (P2L)
- Too much traditional work spent on topics such as: 5S, CIP, GK, LCD.
- Lack of time to spend on future projects which could help our business become digitalized
- Compromises our technical placements
- Losing focus on digitalisation
What are we doing to change that?

- Simon Sinek talk – generation skills gap
- We need to collaborate more
- Decided to take a less-traditional approach
- Take ownership of our development
- Push for digitalisation
- Agile teams
What did we learn?

What TO do:
• View innovation and digitalisation as the key for sustainability
• Digitalisation is constantly moving
• Overcome the generation gap
• We want to help the business, but we need to learn how

What NOT TO do:
• DO NOT prioritise daily tasks over digitalisation and innovation
• DO NOT feel like you always have to say yes to everything – speak out if you do not agree

What is it like being the ones learning in a business?
• We take digitalisation for granted
• We also have grown up with ever developing technology
Our message to the audience

Focus on the future, not on the past.
Thank you
The more you think you know about training for the digital future the less you really understand.
West Suffolk College
Gary Jefferson  – Executive Director for Engineering and Technology
Engineering, Science and Digital Innovation Centre

- Opening September 2019
Objectives

- Build a STEM centre with a national reputation for excellence

- WSC Three Pillars
  - Qualifications
  - Connections
  - Character Strengths
Concept to Realisation

- Funding
- LEP
- Employers & Partners
- Staff
- Institute of Technology
Final Thoughts

- Training and skills development are the future
- Work with your local provider
- In collaboration, great things can be achieved
  - Support your local provider and support the Eastern Regions Institute of Technology