

OPENHYBRID

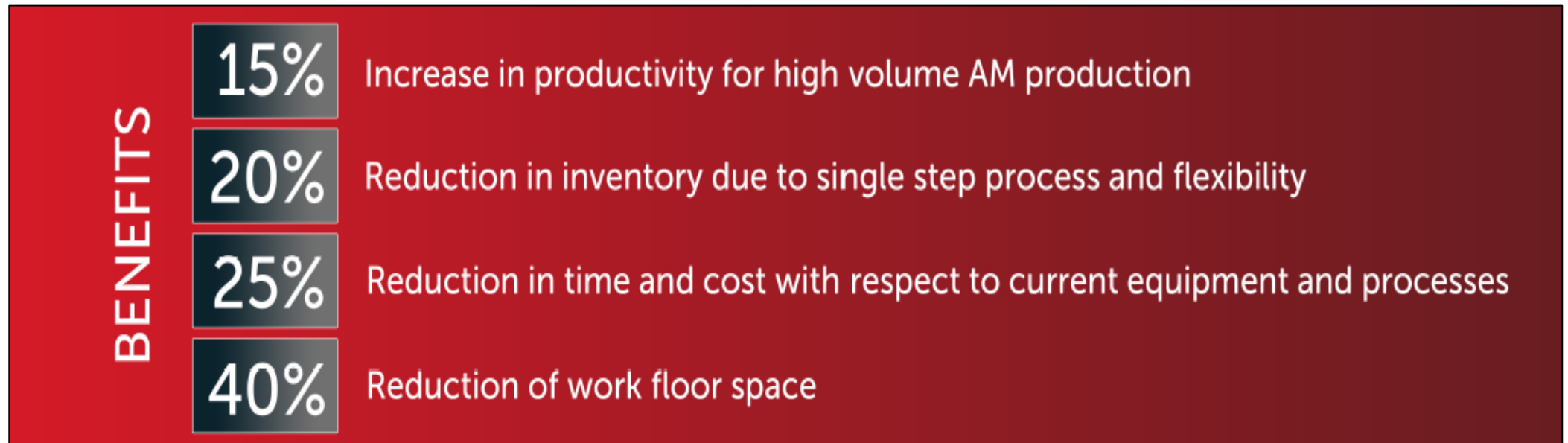
Closing of the morning session



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Targets and key benefits

- Increased productivity,
- Wider range of process tools,
- Greater ease of integration from small to large platforms,
- Higher part quality,
- Improved ease of use.



Develop all-in-one hybrid additive/subtractive system based on laser cladding and 5 axes milling....

1. Smart cladding tools which provide information on their status/condition
2. Extend the capabilities of HMTs cladding heads to include wire feed-stock
3. Investigate improved inter gas shielding methods
4. Develop and test in-process stress relieving and heat treatment methods
5. In process part inspection (accuracy and NDT)
6. New easy to use software to control the combined machining and cladding process
7. Develop comprehensive suite of process simulation tools
8. Integrate the technology on two new platforms (5-axes milling machine and gantry)
9. Test the performance of the new hybrid systems
10. Undertake demonstration case studies in three key end–use sectors



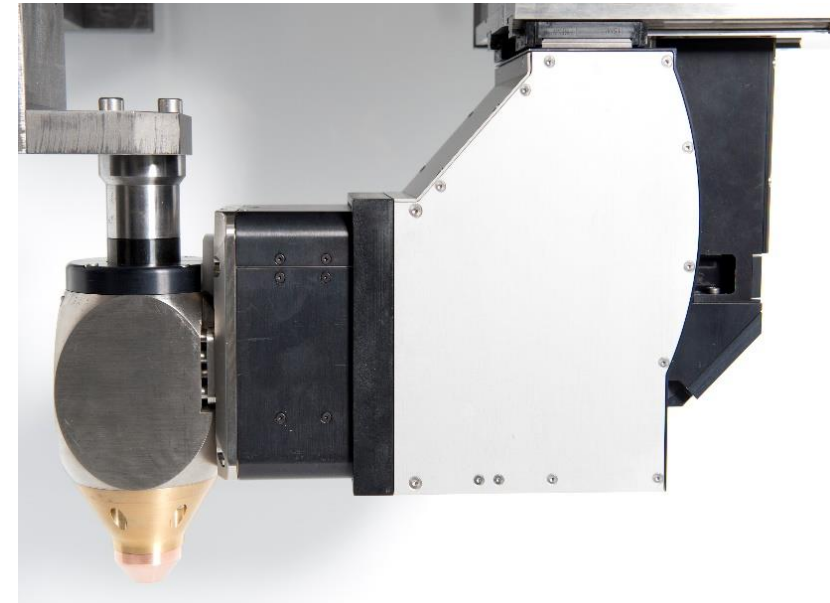
To help accelerate the industrial adoption of technology developed....

- Develop cost and LCA models to help organisations understand the benefits of hybrid AM
- Produce a range of training courses
- Support the development of relevant standards



Open platform approach which will place Europe in a leading position in hybrid AM;

- Anyone can design new process tool which are compatible with HMTs docking system,
- Easy to use software,
- Modular docking system,
- Compact/low weight/robust processing tools,
- Suitable for wide range of machine tool platforms,
- New machines and retrofitable



Conclusions

- Highly ambitious and challenging project
- Despite this we have achieved our objectives
 - New process tools for HMT
 - Smart head which sense their operation and status
 - Worlds first dockable wire feed head
 - New easy to use CAD/CAM software
 - Comprehensive process modelling
 - Two completely new hybrid platforms
 - Proven case studies in three end-user sectors

Knowledge developed is ready to exploit

Product develop are ready to commercialise

