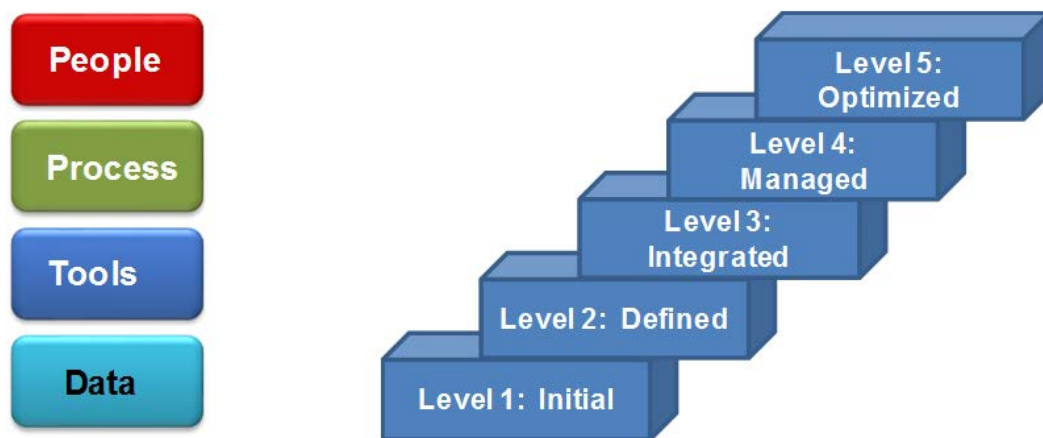


### Raising the maturity level of materials modelling adoption in industry

#### Introduction

Maturity Modelling is a process improvement approach and benchmarking framework whose goal is to help organisations improve their performance. It serves as a reference system for objective mapping of “as is” and “to be” states for business activities and operations.

The Materials Modelling Maturity Model used by the EMMC is based on a Maturity model developed by Accelrys (now Biovia). It establishes a mapping of characteristics and behaviours in each of 4 key areas to a Maturity Level:



#### Objectives

Session 12 seeks to raise the maturity level of materials modelling adoption in industry by strengthening people, tool, process and data which can be seen as the four pillars of a successful deployment of materials modelling in the industrial community. The session aims to engage with leading modelling experts in industry in discussions to see how each of the pillars need to be strengthened in such a way to lead to a holistic solution for a deep and wide engagement of all involved stakeholders to make materials modelling a strong contender in their organisation. We are aiming to find suggestions that may lead to a stable/established deployment of modelling in Industry. Based on some examples for intermediate success our invited speakers had with materials modelling we will find first stepping stones to more impact in the long run. We are also looking forward to hear from opportunities and best practices our participants can share, but also some hurdles and barriers they encountered.

- Share what works very well and what barriers need to be overcome.
- Provide more insights and recommendations that will help to support future deployment of materials modelling in industry.

#### Background information and documents

Maturity level assessments are quite common in many fields, for example there is a useful one by PWC on Industry 4.0: <https://i4-0-self-assessment.pwc.nl/i40/landing/> for a Digital

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Operations Self-Assessment. It helps to benchmark against others, set objectives and identify needs for action.

The actual questionnaire for the EMMC Materials Modelling Maturity Model can be found here <https://ec.europa.eu/eusurvey/runner/MatModMatMod2018>.

## Discussion points and questions

The following questions summarize the issues for this session.

- Can we list barriers and suggestions to overcome these to enable businesses to transfer their modelling ecosystem to a higher level?
- How can we make a wider range of stake holders aware of the modellers and their role?
- How can we promote the role of a translator?
- How can we promote the importance of early involvement between modellers and project teams?
- As one needs longer term changes of mindsets, what should be on an “On-boarding package” for higher level management?
- Better education: How can we support the changes in the undergraduate education towards even more know-how towards modelling? How can we support the education of non-modellers via different channels?
- How can we enable the specialisation/differentiation on roles within modelling as “the modeller” is deemed too generic?
- How can we support the fact that there is a difference between a data scientist and a modeller?
- What could be the best practices how materials modelling shall feature in the process of a company? Can we suggest a metrics and KPIs for modelling?
- How can we encourage better documentation for tools via SWO channels or internal WIKI pages and who can we find out what should be in there?
- How can we promote the concept of Data Trusts?