



## Training resources for Translators



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- Introduction: EMMC vision and challenges
- EMMC Training resources
  - Translators guide
  - Tasks of the translator
  - Translation Case template
  - Translation Case examples
- Discussion

EMMC promotes the application of **materials modelling** to support the European **Industrial Competitiveness**



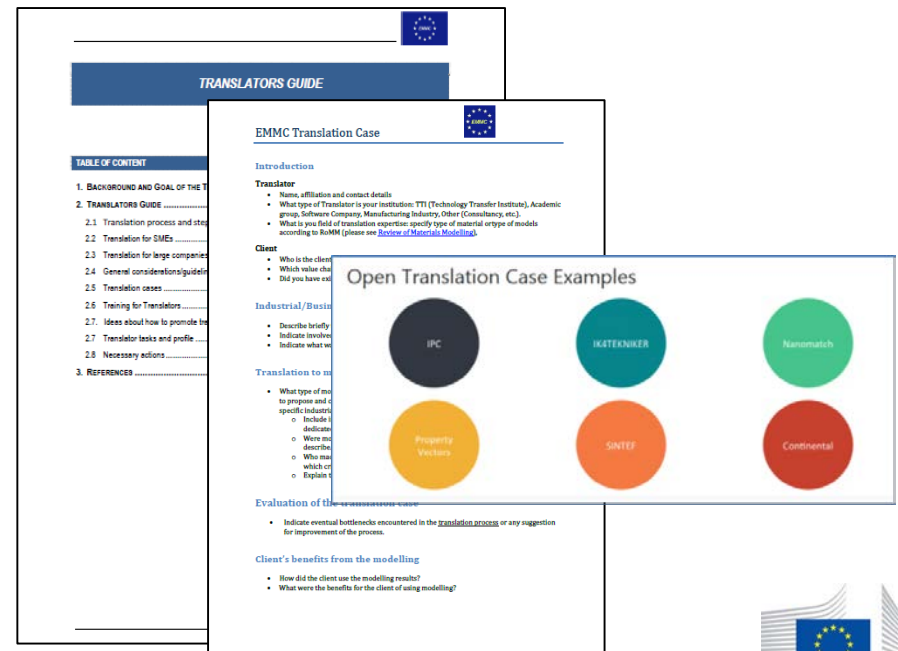
## Challenges

1. Open Innovation Platform
2. Translational Work Flow
3. Marketplaces and Data repositories
4. Materials Modelling Ontology
5. Infrastructural Facilities and
6. **Attract, educate and train**

**Focus of this presentation**

## EMMC Training resources

- Translators guide
- Translation case template
- Translation case examples



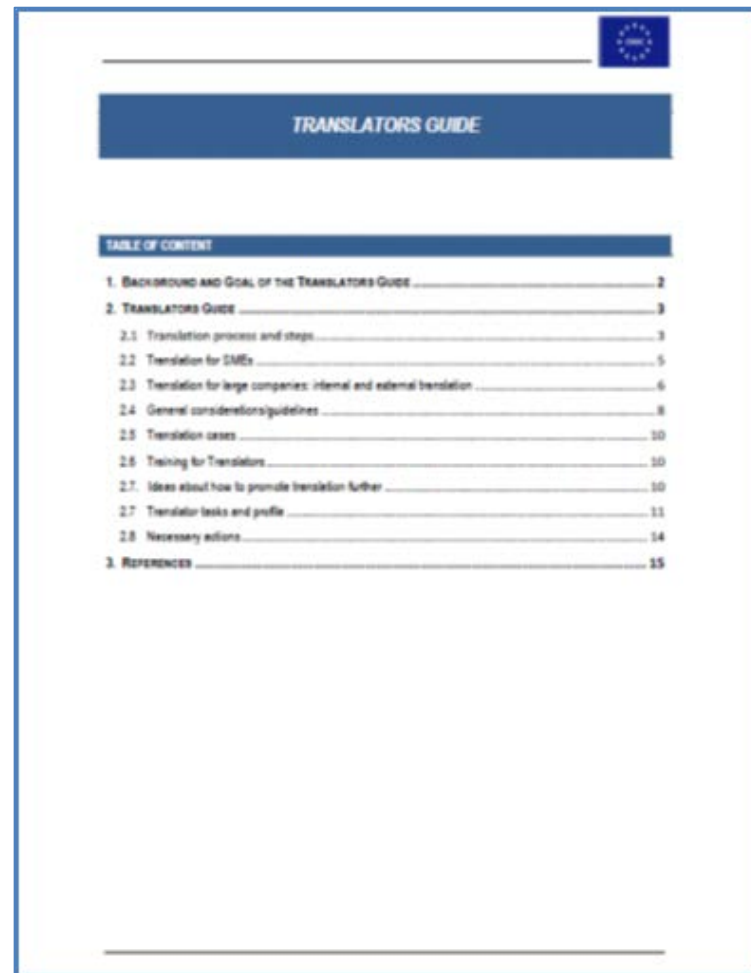
**TRANSLATORS GUIDE**


**EMMC Translation Case**

**Open Translation Case Examples**

- IPC
- KATEKNIKER
- Nanomatch
- Property Vectors
- SINTEF
- Continental

- The translators guide is intended to be used by:
  - the Translators themselves for guidance
  - by the industrial end users to know what to expect from the translators
- This guide can help translators when
  - approaching industry
  - when defining/choosing the right modelling workflow
  - when defining the benefits of the modelling project.
- It gives directions on possible ways to execute translation.





## EMMC Translation Case

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### Introduction

**Translator**

- Name, affiliation and contact details
- What type of Translator is your institution: TTI (Technology Transfer Institute), Academic group, Software Company, Manufacturing Industry, Other (Consultancy, etc).
- What is your field of translation expertise: specify type of material or type of models according to RoMM (please see [Review of Materials Modelling](#)).

**Client**

- Who is the client? Is the client a large company, SME or a consortium thereof?
- Which value chain segment (e.g. material producer, converter, end-user) it is positioned?
- Did you have existing collaboration with the client?

### Industrial/Business Case

- Describe briefly the industrial problem.
- Indicate involved budget or preferred time to solution (duration).
- Indicate what was the expected outcome of the translation process.

### Translation to modelling solution


- What type of model(s) did you use propose and use? Explain arguments and criteria used to propose and choose a specific modelling approach and modelling executor for the specific industrial problem.
  - Include inventory and data quality assessment. Was it necessary to realize dedicated experiments prior to simulation? Describe the required validation steps.
  - Were model accuracy and necessary investments discussed? If so - please describe.
  - Who made the final choice for the model and for the modelling executor? Based on which criteria?
  - Explain the involvement of the client in the case.

### Evaluation of the translation case

- Indicate eventual bottlenecks encountered in the translation process or any suggestion for improvement of the process.

### Client's benefits from the modelling

- How did the client use the modelling results?
- What were the benefits for the client of using modelling?



## EMMC Translation Case

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### Economic impact of the modelling project

- When possible, estimate the **Total Client Investment (TCI)** in this modelling project as the sum of all Direct Costs. Direct Costs are, for example: Software cost/ licenses, Hardware cost, IT support, Labour/ Material cost, Training, Staff cost, Computing cost.

Direct Costs	EUR
<b>Total Client Investment (TCI)</b>	<b>EUR</b>

- Estimate the **Total Client Benefit (TCB)** from this modelling project. Please consider certain KPIs (e.g. costs for saved number of experiments, cost for saved materials, costs for personnel saved for experimental work, improved processing etc. For more information please look in the attached document on KPIs or at [Economic Impact of Materials Modelling](#)).

Client Benefits (e.g. based on certain KPIs)	EUR
<b>Total Client Benefit (TCB)</b>	<b>EUR</b>

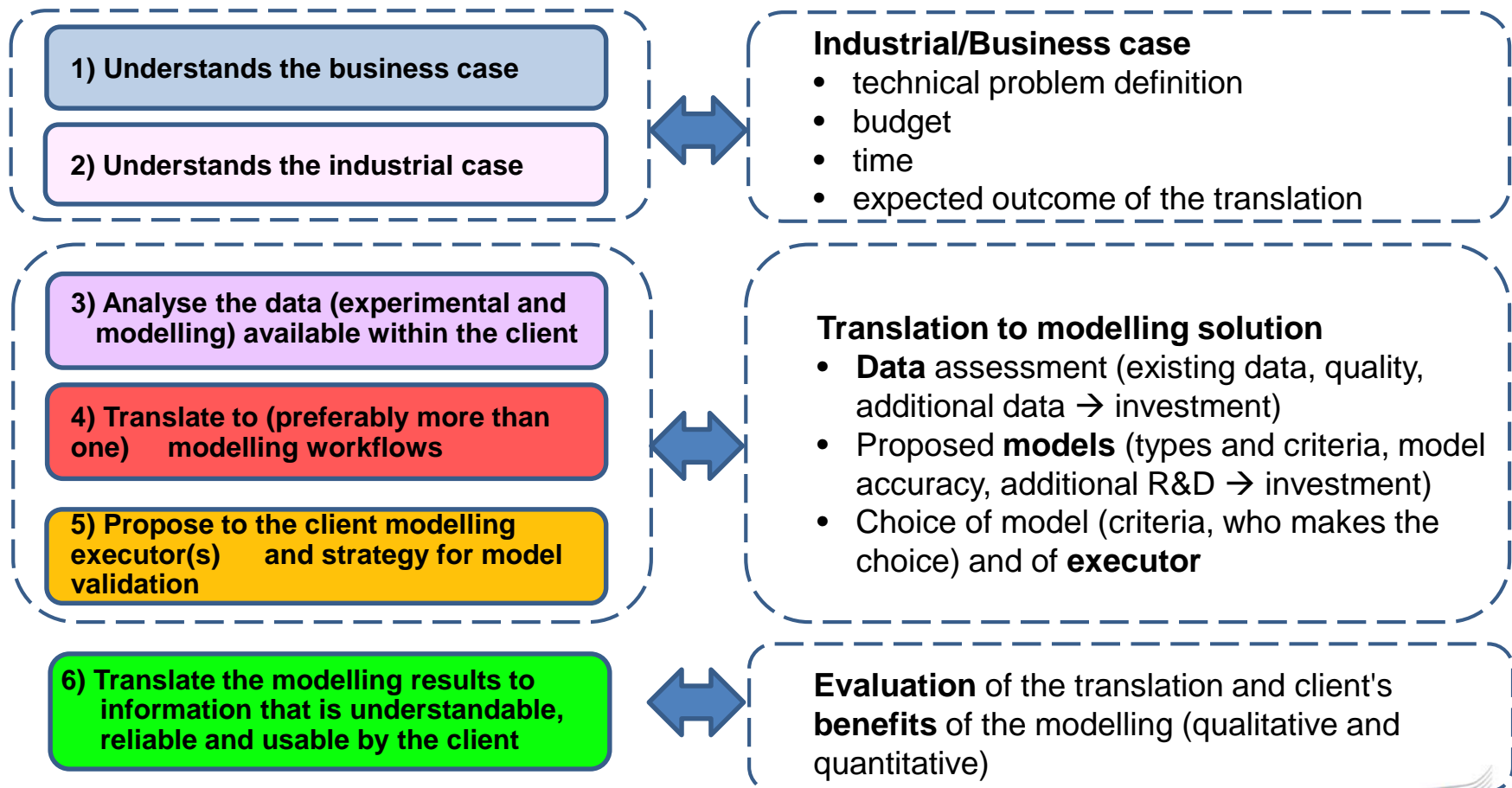
### Return on investment (ROI)

- Calculate the ROI as a ratio of the Total Client Benefit (TCB) and the Total Client Investment (TCI):  
 $ROI = TCB / TCI$


ROI	
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## Tasks of the translator

## Content of the translation case template



- Introduction
- Industrial/Business case
- Translation to modelling solution
- Evaluation of the translation case
- Client's benefits from the modelling



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#### Evaluation of the translation case

- Indicate eventual bottlenecks encountered in the [translation process](#) or any suggestion for improvement of the process.

#### Client's benefits from the modelling

- How did the client use the modelling results?
- What were the benefits for the client of using modelling?

- Economic impact of the modelling project
  - Total Client Investment
  - Total Client Benefit
  - Return On Investment (ROI)



### EMMC Translation Case

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**Return on investment (ROI)**

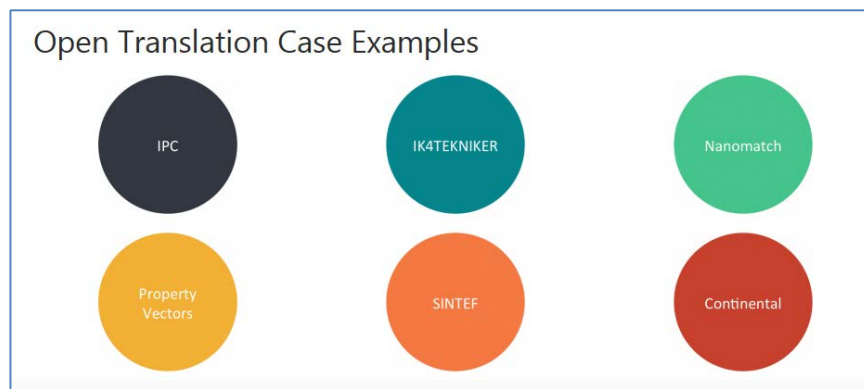
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ROI	
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- Open Translation Case examples: 6 available now online, 10 under preparation
  - IPC
  - IK4TEKNIKER
  - Nanomatch
  - Property Vectors
  - SINTEF
  - Continental



## EMMC Training resources: where to find them

After Login,

Path: EMMC website, under Resources/Translation and training for companies resources

Direct link: <https://emmc.info/translation-and-training-for-companies-resources/>

### Open discussion

- Translation case template: show case of translation. Is it including all needed information?
- Use of template on marketplace
  - For translators: to show their competencies
  - For companies: to evaluate if a translator is relevant for their (modelling) need/business case



- EMMC Roadmap 2018, <https://emmc.info/results/>
- EMMC Translators guide, <https://emmc.info/wp-content/uploads/2018/01/Translators-Guide.pdf>
- EMMC Translation template, <https://emmc.info/emmc-translation-case-template/>
- Natalia Konchakova, Denka Hristova-Bogaerds, Daniel Höche, Pietro Asinari and Luca Bergamasco "Translation from industrial challenges to materials modeling solutions" (2018) [https://emmc.info/wp-content/uploads/2018/06/EMMC-Translation\\_2018.pdf](https://emmc.info/wp-content/uploads/2018/06/EMMC-Translation_2018.pdf)
- Note: for some of these documents, the EMMC member login is required. If you are not yet registered you can do it here (free): <https://emmc.info/register/>