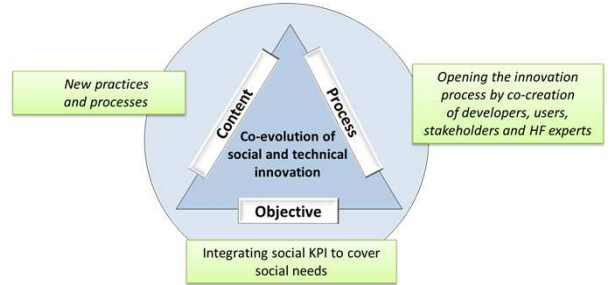


## Combining Technological and Social Innovation

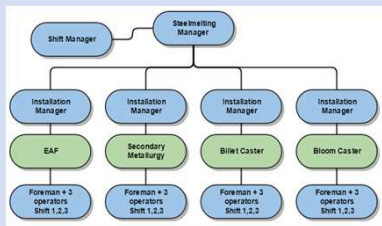
### Need

- New challenges and low impact of new software systems (e.g. by poor user acceptance) creates a need for a new innovation paradigm
- Creating an excellent system and making the best use of it needs considering the ideas of future users and internal stakeholders
- A joint optimisation of technology, people and organisation is needed to unfold the full potential of a new digital solution

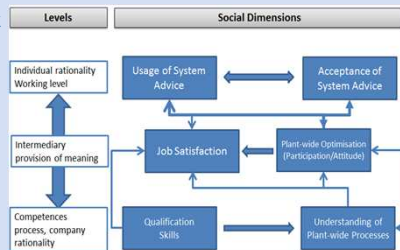


### Approach

- Identifying future users and internal stakeholders to get them involved in the development process (by raising their requirements and early feedback to mock-ups, prototypes)



- Integrating a set of social key performance indicators (KPIs) to get early feedback during development

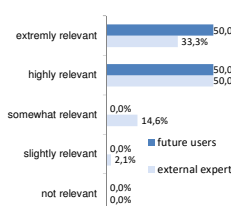


- Conducting surveys (questionnaire, interviews and workshops) among future users and external experts

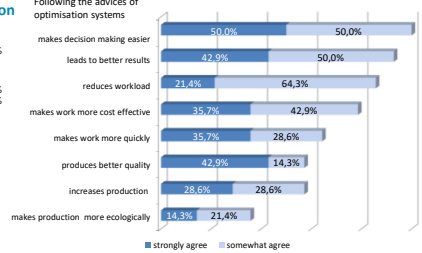
### Application

- Analysing survey results

#### Relevance of Plant-wide Optimisation



#### Usage of Optimisation System



- Deriving human factors requirements

	Person-to-person requirements	Person-to-system requirements
<b>Process-oriented requirements</b>	Communication between sub-processes aligned with the plant-wide optimisation approach	Support of the best possible interaction of using data and practical knowledge
<b>Result-oriented requirements</b>	Plant-wide processes as part of operator training ratio relative to baseline	Usage of system advice

- Developing action plans (currently draft)

Human Factor Requirement	Activities	How many, how long, at what time?	Involved People	Request from SIDENOR/Tecnalia
Future changes of work content		2 hours During testing the prototype	Company project manager, Developer, Future users/internal stakeholders	Job profiles of future users and internal stakeholders
Needs for detailed information from the system and/or other sub-processes	Workshop	1 hour During testing the prototype	(interviewed people from the first run of surveys), Human Factors team (HF)	No requests
Needs for further communication channels		1 hour During testing the prototype		Preparing a list of practices, how and when future users are communicating with preceding and subsequent areas/processes up to now
Visibility of decisions of users on the final product		1 hour During testing the prototype		No requests

### Benefit

- Ensures that plant-wide optimisation brings the envisioned benefits
- Ensure that the system fulfills the end user needs
- Improves user acceptance
- Supports learning of end users and software developers
- Helps the end user to use the COCOP system more effectively
- Better process operation via best fit between technological tools, organisational practices and user skills