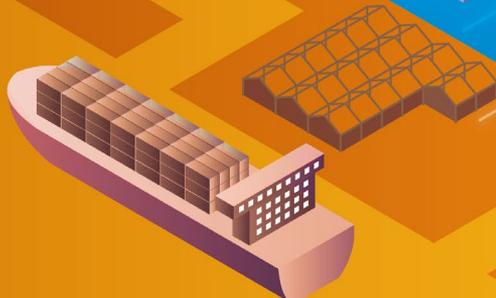


Urban Resilience

SURF OER Updates
Carissa Champlin, SURF
Project Lead

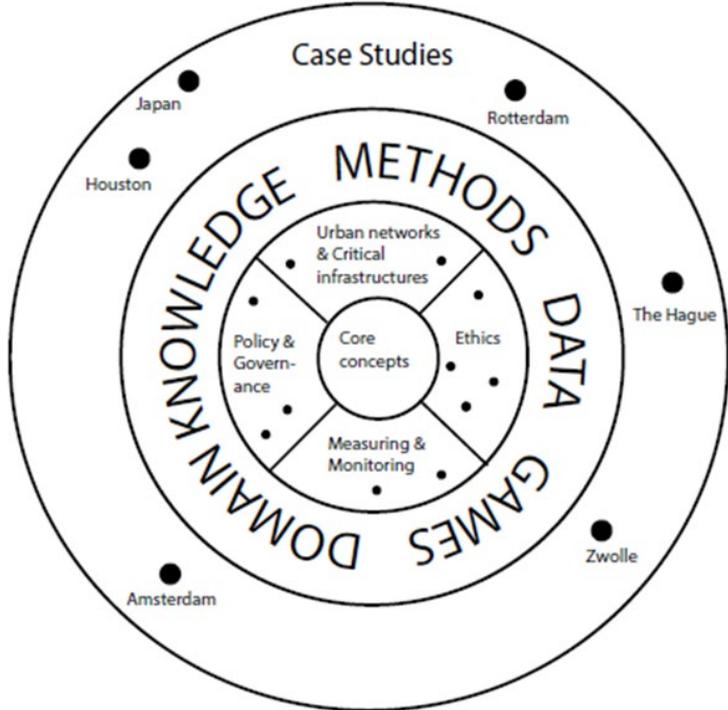


4TU. Resilience
Engineering

OUTLINE

- Introduction of the 4 SURF OER Pillars
- Updates per pillar
 - What we accomplished during meetings
 - What's been happening since meeting series
 - What's next
- Goals for early 2021

SURF OER PILLARS



1. RE CONCEPTS FOR COHERENCY

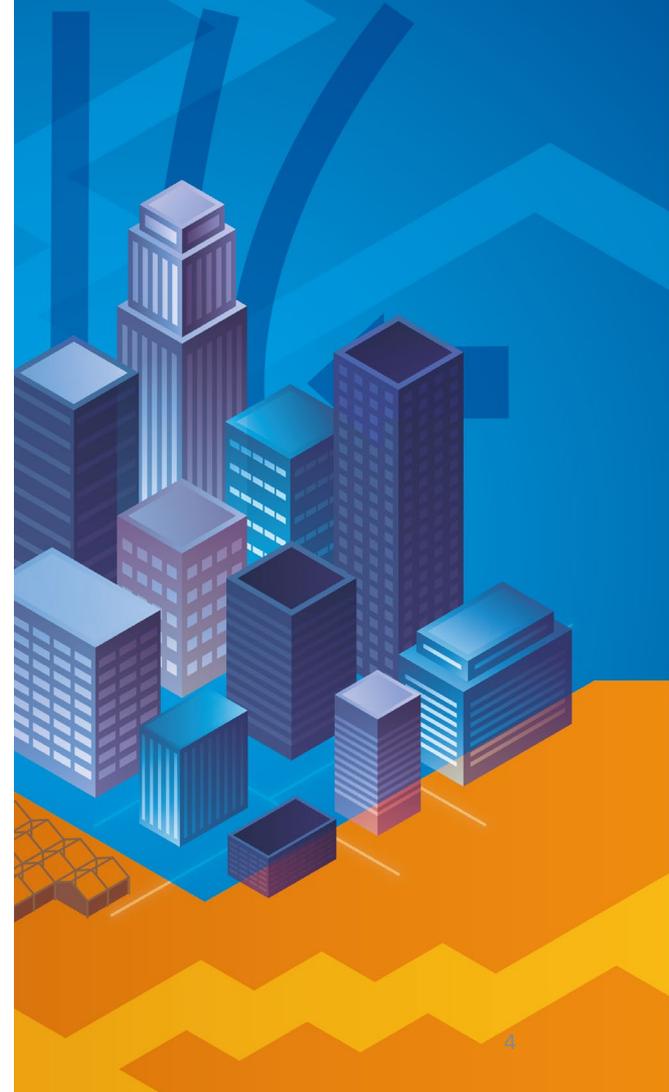
2. OER PLATFORM FOR REUSE

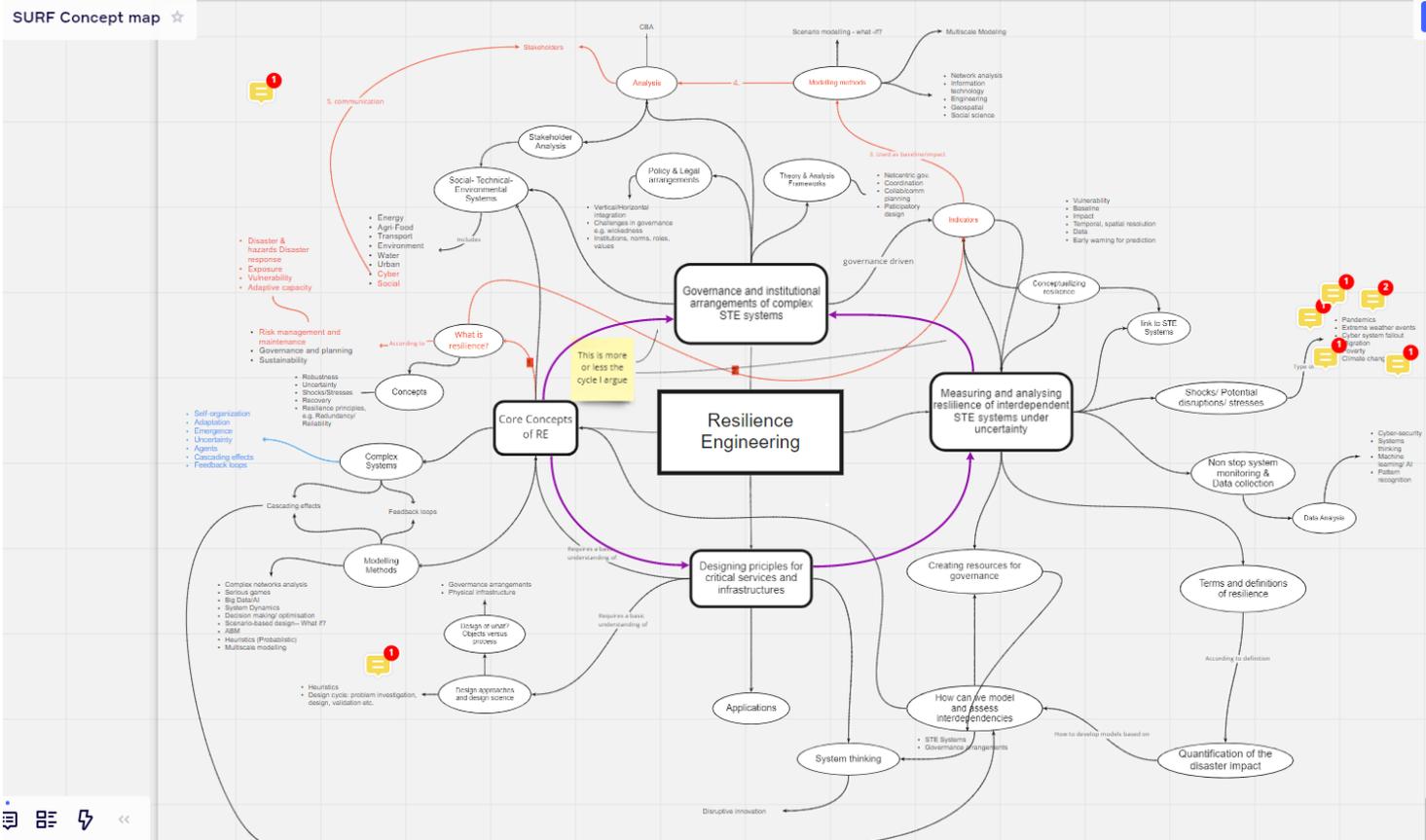
3. PRACTICAL RELEVANCE VIA CASES

4. GAME ENVIRONMENT FOR CASES

PILLAR I

RE Concepts





Platform survey results

Broad range of support needs

- Licensing (66%)
- Creating OER (50%)
- Uploading OER (50%)

Interest in many types of OER formats

- Datasets (18%), cases (71%), lectures (76%), exercises (81%)

Preferred for teaching- Introductory OER (72%), Methodologies (66%), Cases (56%)

Measuring and Monitoring Learning module 68% selected!!

Easy to integrate into lecture! (62%), peer reviewed (57%)

WHAT'S HAPPENED SINCE?

Set up an OER workflow

- Step 1. learn about what are OER and licensing on SURF website
- Step 2. In-take conversation with Claudiu
- Step 3. Show us your teaching materials
- Step 4. Create your OER(s)!
- ...

OER Guidelines & Support Packet

- Metadata sheets
- Templates
- Editing instructions
- Licensing
- Reference information
- SURF support!

WHAT'S NEXT?

OER Development

Option A. I have teaching materials I want to publish NOW! – December 2020

Option B. I want to develop new materials and publish by 2021!- ongoing

- I have already spoken to Carissa and know what I want to publish, contact r.kromanis@utwente.nl (c.j.Champlin@tudelft.nl in CC)
- I haven't told SURF what I want to publish, contact c.Forgaci@tudelft.nl (c.j.Champlin@tudelft.nl in CC)

WHAT'S NEXT?

RE Conceptual Framework

- Task team to clean up the concept map- e.g. redundancies, linkages, etc.
 - Integrating into OER platform as roadmap/directory
 - Integrating into DeSIRE research?
- Contact: c.j.Champlin@tudelft.nl

PILLAR II OER Platform



Where we are

The screenshot shows the '4TU Resilience Engineering Resources' website. At the top, there is a navigation bar with 'Home', 'Research', 'Academy', 'Resources', 'News & Events', and 'About us'. Below the navigation bar is a search bar with the text 'Start searching...' and a 'Search' button. Underneath the search bar are four filter dropdown menus: 'Themes', 'Methodology/approach', 'Education', and 'Formats'. Below the filters, it says '6 RESULTS - FILTERED ON: Education'. The main content area displays several search results, including 'Deconstructing urban resilience', 'Flood Risks and Defences - Open textbook', 'Flooding (lecture)', 'Inclusive Energy Systems: the values perspectives', and 'Orroville Dam Weir Orifice'. A sidebar on the right contains a call to action: 'Are you interested in resources about resilience? We are developing and collecting open materials, which can be used for free. Please check out this page: Here you will find different sorts of open resources. Please apply the filters for searching (theme, methodology, type of resource and format). A large number of additional resources will be published over the coming months. Do you like to join our initiative to share research and educational materials? Then please do contact us.'

The screenshot shows a resource card with the following information: 'File format: Archive', 'Publication date: 27/05/2016', 'Language: Dutch', and 'Copyright: Attribution-Noncommercial-NoDerivatives'. Below this information is a yellow button labeled 'View material'.

in 0 | 0 | 0

Add material to collection

To be able to add materials to collections you must first log in

[Log in with SURFconext >](#)

CMap Tools : Geef concepten visueel weer via concept mapping

IHMC KlasCement

Quality



0



0 Collections



2 Viewed



0 ratings

[Review](#)

Summary

CMap Tools is een toepassing waarmee men aan concept mapping (CM) kan doen. Concept Mapping bestaat erin dat men samen met andere leerlingen of studenten informatie grafisch weergeeft. Het is een manier om kennis op te bouwen. Concept Mapping behoort, net zoals Mindmapping, tot de familie van de Graphical Organisers.

Themes

No themes

Keywords

- [cmap.ihmc](#)
- [cmap.ihmc](#)
- [CMap Tools](#)
- [CMap Tools](#)
- [concept](#)
- [concept](#)
- [concept mapping](#)
- [concept mapping](#)
- [constructief leren](#)
- [constructive learning](#)
- [free software](#)
- [grafisch voorstellen](#)

Where we want to be

Platform survey results

Preferred platform search options

- By keyword (84%)
- By Learning module (65%)
- By STE system (45%)

Keywords

- Some additional keywords not on our RE conceptual framework
 - Add to framework vs.
 - Add open field search function

WHAT'S HAPPENED SINCE?

Linked with RE Concepts work (Pillar I)

WHAT'S NEXT?

Setting up the SURF Urban Resilience Community page on Zoekportaal

Adding Collections:

- Case studies
- Games
- Guidelines & Support

The screenshot displays the 'Mijn Community' interface. At the top, there are buttons for 'Openbaar', 'Uit', 'Voorbeeld', and 'Opslaan'. Below this is a navigation bar with 'Algemeen', 'Collecties', and 'Uitgelicht'. The main section is titled 'Collecties' with a subtitle 'Beheer hier de collecties van de community' and a 'Nieuwe collectie' button. A grid of collection cards is shown, each with a 'Collectie' icon, a title, a 'Naam community' label, and '13 Items'.

Collectie	Naam community	Items
Resilience Engineering Core Concepts	Naam community	13 Items
Ethics of Resilience	Naam community	13 Items
Design Principles for Critical Services & Infrastructures	Naam community	13 Items
Measuring & Analysing Resilience of Interdependent STE Systems under Uncertainty	Naam community	13 Items
Governance & Institutional Arrangements for Complex STE Systems	Naam community	13 Items

PILLAR III

NL & Intl. Cases



WHAT WE DID

			POSSIBLE SOLUTIONS	POSSIBLE CASE STUDIES <small>(please write your name with a pic)</small>	
			Alex Stefanov, Joao Cortesao, Ahmadreza Marandi, Claudia Fecarotti, Juan Pablo Aguilar Lopez, Jeremy Bricker, Laura Genga, Mitrofan Curti, Sanda Lenzholzer		
TOPIC	TYPE OF STRESSOR	EXAMPLES	Resilience Resilience Engineering & Transitions	Your Name <small>(add extra row if multiple people have a case study that covers the same topic)</small>	Case Study or Studies <small>(separate with ; add hyperlink if the project has a website)</small>
climate	acute shock	heatwave; extreme wind speed; weather events (hurricane/typhoon); intense rainfall	climate-responsive urban design and landscape architecture; vegetation; green walls; green roofs; permeable paving; depaving; shading devices; water features (fountains and water mists);	Joao/Sanda	Really Cooling Water Bodies in Cities (REALCOOL)
	chronic stress	urban heat island; damage to infrastructure (e.g. bending of railways); mass migration; drought; changing landscapes and ecosystem shifts; shifts in riverine flood; pluvial flood; overflow of public drainage systems; tsunami; hurricane; typhoon; landslide; dam break; hacking/cyber crime of flood defence	climate-responsive urban design and landscape architecture; vegetation; green walls; green roofs; permeable paving; depaving; shading devices; water features (fountains and water mists);	Joao/Sanda	
water	acute shock	sea-level rise; drought; subsidence by ground water abstraction; overexploitation of (ground)water; aging infrastructure / rusting pipes; lack of disconnection of generator and transmission lines, cascading events in electric power transmission system, blackout;	Multi-functional flood defences; Early Warning Systems; Forecasting Systems; Evacuation plans; Escape Routes; Structural resilience measures (e.g. gates, pumps, elevated houses, Permeable Asphalts, Floodable promenades, Convergence Channels, Detention Basins); Flood Defence Lots of money for pipe maintenance, Sewer system asset management, Maintenance planning, Drought forecasting systems, Groundwater monitoring systems.	Jeremy - Japan; Baukje/Jeremy - Houston	
	chronic stress	energy transition;	Controlled islanding and power system restoration	M. Curti, Alex	BioORC - Electricity generation from Industrial exhaust heat
energy	acute shock	accidents; disasters (earthquakes, pandemics, tsunamis); terror attacks; event based (e.g., concert, festival etc.), power outages, cyber attacks on digital privacy infringement; identity theft; data leakage; phishing; insider threats	Security standards for substation automation; redundancy of critical resources; response strategies; decision support systems	Alex-Laura	Ukraine power grid cyber attack; https://en.wikipedia.org/wiki/December_2015_Ukraine_power_grid_cyberattack
cyber & ICT	acute shock	pests, plagues, draughts, access to season workers, supply to super markets and restaurants, policy changes, price fluctuations world market	anomaly and attack detection systems; semi-automatic attack response strategies; personnel training and regular updates	Alex-Laura	Ukraine power grid cyber attack; https://en.wikipedia.org/wiki/December_2015_Ukraine_power_grid_cyberattack
	chronic stress	eutrophication, (stress to other system; pesticides in drinking water), draughts related to other land uses (prioritization to drinking water and nature areas)			
agri-food	acute shock				
	chronic stress				

Figure 3 Case Study Matrix Showing Possible Resilience Engineering Solutions

WHAT'S HAPPENED SINCE?

Path 1

Environmental engineering MSc course at TU Delft

Path 2

In-depth case studies

(contact: Martine Rutten & Claudia Rot)

WHAT'S NEXT?

Path 1

Environmental engineering MSc course at TU Delft (contact: Martine Rutten & Claudia Rot)

- “trend reports” for 6 SURF cases (Houston, Japan, Amsterdam, The Hague, Rotterdam...)
- provide analyses of relevant shocks and stresses and solution strategies
- TTers will be asked to provide expertise input for trend reports and to review the reports

.

WHAT'S NEXT?

Path 2

In-depth case studies

- TTERS who indicated an interest (A. Stefanov, C. Forgaci, N. Aydin, A. Mirandi, J. Cortesao, S. Copeland, M. Curti, F. Metz, others?)
- TTERS will also be asked to develop materials/input for the 6 SURF cases from their domain or discipline for a more integrated view of shocks/stresses and impacts/solutions across STE systems.

PILLAR IV

Game Platform



WHAT'S HAPPENED SINCE?

Games Path 1. Environmental engineering Msc.

Games Path 2. Developing the SURF resilience
framegame

WHAT'S NEXT?

Games Path 1. Environmental engineering Msc.

- Students will customize a selection of open source resilience games as simple models
- Working with shocks, stresses, impacts and testing of solutions described in the trend reports.
- TTERS will be interviewed by students working on their topic and asked to give feedback on the developed games.

WHAT'S NEXT?

Games Path 2. Developing the SURF resilience framegame

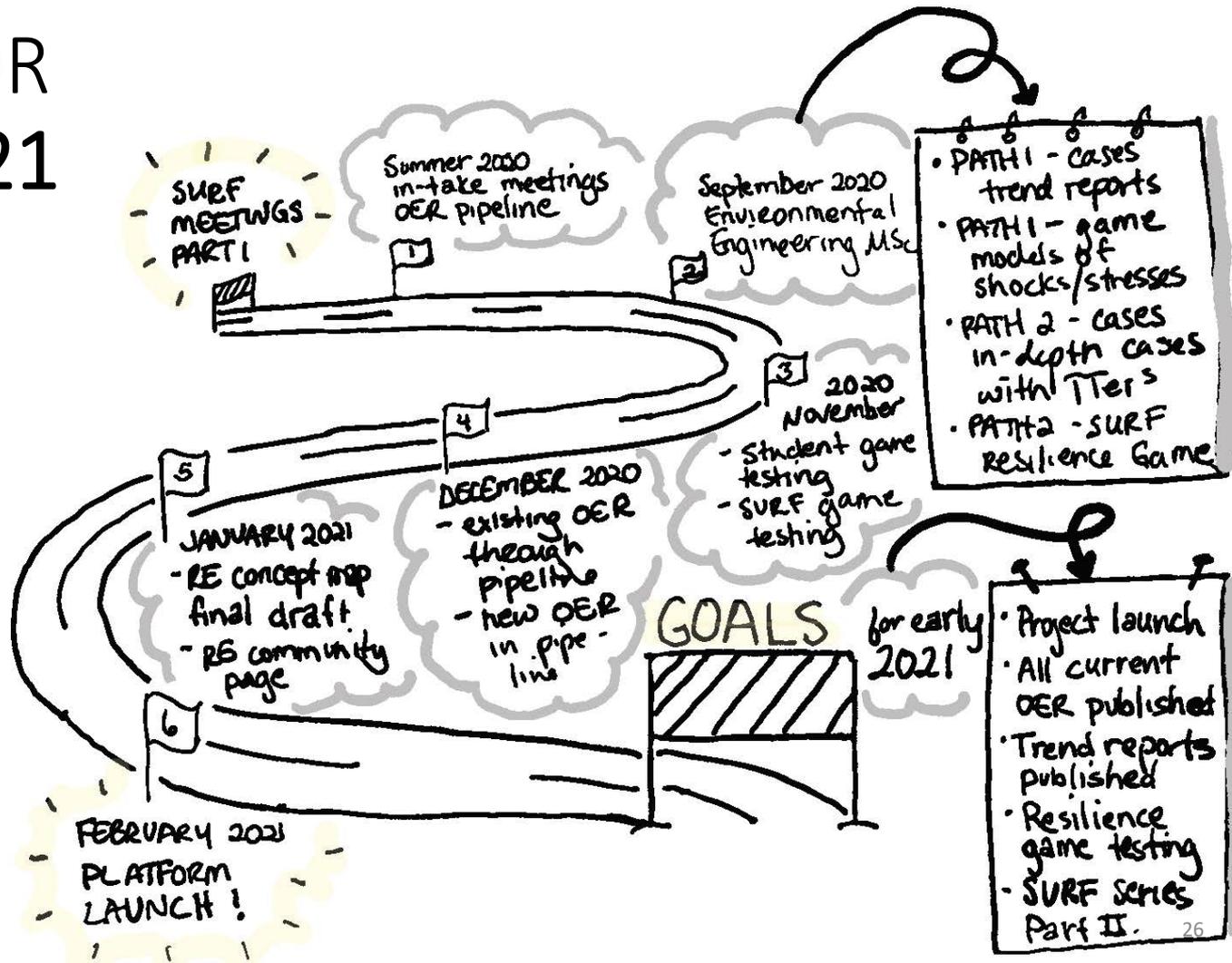
- First for the Hague
- What's needed- DeSIRE community members willing to test game in classroom (November 2020- February 2021).
- *TTERS interested in game development (S. Copeland, C. Forgaci, JP Aguilar Lopez, A. Mirandi, M. Curti)*
- November 2020- concept testing of student games (Games path 1 & 2)
 - Joint International Resilience Conference.
 - In classroom!!

GOALS FOR EARLY 2021

Pillar Key	Explanation
Conceptual framework	revising the RE concept map
OER for RE	covering your teaching materials in OER or creating new OER to fill in Conceptual Framework
NL Case Studies	Developing teaching materials for specific Dutch case & testing in your classroom
Intl case studies	Developing teaching materials for specific International case & testing in your classroom
Game platform	Game development & testing in your classroom

	2019				2020								2021																												
Tenure Trackers & Associated Scientist	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	Your comments													
Markus Meyer	[Redacted]																																								
Samantha Copeland	[Redacted]																																am approaching someone about testing								
Alex Stefanov	[Redacted]																																	I can create slides, 1/2 conference papers							
Claudiu Forgaci	[Redacted]																																								
Nazli Aydin	[Redacted]																																				I am interested in contributing the case				
Juan Pablo Aquilar Lopez	[Redacted]																																				I'm working at the moment in the flood				
Claudia Fecarotti	[Redacted]																																								
Ahmadreza Marandi	[Redacted]																																						20 I will have a course on Robust policies in Q2.		
Laura Genga	[Redacted]																																								
Rolands Kromanis	[Redacted]																																								
Mitrofan Curti	[Redacted]																																								
George van Voorn	[Redacted]																																							The game could be tested in relation to the	
Joao Cortesao	[Redacted]																																								
Guus ten Broek	[Redacted]																																								
Florence Metz	[Redacted]																																								I could add to the governance part of the
Wietke Pot?																																									
Elise Peronne?																																									

GOALS FOR EARLY 2021



GOALS FOR EARLY 2021

Pillar Key	Explanation
Conceptual framework	revising the RE concept map
OER for RE	covering your teaching materials in OER or creating new OER to fill in Conceptual Framework
NL Case Studies	Developing teaching materials for specific Dutch case & testing in your classroom
Intl case studies	Developing teaching materials for specific International case & testing in your classroom
Game platform	Game development & testing in your classroom

Tenure Trackers & Associated Scientist	2020						2021		
	6	7	8	9	10	11	12	1	2
Markus Meyer									
Samantha Copeland									
Alex Stefanov									
Claudiu Forgaci									
Nazli Aydin									
Juan Pablo Aquilar Lopez									
Claudia Fecarotti									
Ahmadreza Marandi									
Laura Genga									
Rolands Kromanis									
Mitrofan Curti									
George van Voorn									
Joao Cortesao									
Guus ten Broek									
Florence Metz									
Wietke Pot?									
Elise Peronne?									

