COOKBOOK

HOW
TO CO-CREATE
RRI PROJECTS

FoTRRIS

7 PARTNERS

FoTRRIS Project

FROM 6 COUNTRIES

cesie
the world is only one creature

ERRIN European Regions
Research and Innovation Network
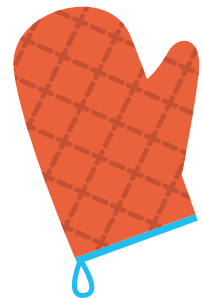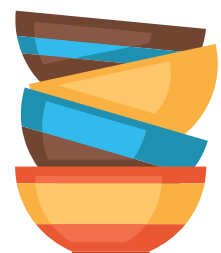
● **ESSRG**
Environmental
Social Science
Research Group

ifz

LGi
sustainable innovation

VNIVERSITAS COMPLVTENSIS
MATRITENSIS

VITO
vision on technology

CONTENTS

FROM FoTRRIS'
TRANSITION EXPERIMENTS
TO A COOKBOOK

The FoTRRIS project aims at fostering a transition towards Responsible Research and Innovation Systems. One way to do so, is to **co-create R&I projects that match the RRI principles,** or in the case of FoTRRIS, that match the co-RRI principles.

Indeed, FoTRRIS has a special vision on RRI. We believe that the added-value of RRI should be to bring together all actors from the quadruple helix, to collectively reinvent new ways of doing R&I. So, we have decided to call our vision 'co-RRI', which means **co-created Responsible Research and Innovation.**

To co-create co-RRI projects, FoTRRIS proposes **a specific 5-step method.** We have tested this method in 6 transition experiments, in Graz (Austria), Flanders (Belgium), Wekerle (Hungary), Palermo (Italy), and Madrid (Spain).

You can learn more about these transition experiments in Deliverables D3.1 Co-RRI project concepts, D3.2 Evaluation report and D3.3 Validation report. These deliverables are available on **the FoTRRIS website (www.fotrris-h2020.eu),** where there is also a webpage describing each FoTRRIS transition experiment.

Each of these transition experiments concerned a specific topic:
➔ Local food sovereignty (Graz)
➔ Circular economy and resource efficiency in buildings (Flanders)
➔ Sustainable local economic development (Wekerle)
➔ Renewable energies (Palermo)
➔ Refugee crises and women with disabilities (Madrid)

Each transition experiment worked the same: **a competence cell** was set-up, a group of stakeholders from **the quadruple helix** was invited to join in, and then, together, they applied the 5-step method to co-create one or several co-RRI project concepts. We call this group of people all co-creating together, a transition arena. However, as you'll discover below, these experiments were not at all completely identical!

Diversity is key!

WHAT IS RRI?

Responsible Research and Innovation (RRI) means bringing innovations that offer solutions to global challenges. These challenges are complex and interlocked systemic problems, driven by increasing production and consumption patterns, which are in turn institutionalised in legal frameworks and academic theories.

Today, the industrial economic system is negatively affecting the safe space for humanity (in terms of climate, air, water and soil). Therefore, only the design of new socioeconomic systems can truly bring a transition towards thriving communities and ecosystems.

As the global challenges manifest themselves in different ways on a local scale, solutions should also be developed at a local level, while remaining connected to the global agenda (as embodied for instance in the Sustainable Develoment Goals (SDGs)).

A global challenge that manifests at local level is qualified as **'glocal'**.

RRI is about combining the intelligence of **four types of actors** (researchers, policymakers, entrepreneurs, civil society – also called the **'quadruple helix'**), integrating social and economic innovations with technical and legal ones, and involving citizens and stakeholders as equally important actors from the early stages of the innovation project.

Needless to say, in fostering the transition towards RRI systems, various sectors - such as the media, education, culture, finance – have all to contribute and become partners in RRI.

RECIPES TO COOK UP
Your transition experiments

Would you like to know how to set up and manage a transition experiment and learn how to co-create RRI projects for tackling a glocal issue?

If yes, then, this booklet will guide you through **the 5-step method.** Think of it as **recipes for cooking a 5-course meal:** this cookbook is your source of inspiration and gives you the basic ingredients and procedures for every course, but local variation and inspiration are crucial for the success of your meal.

When you look at FoTRRIS experiments, you will discover that there is not one single best way to design a co-RRI process. Many good solutions exist, moreover, co-RRI requires a multitude of tools and methods, varying according to the geographical area, the context, topic, participating experts and citizens, linkages to political priorities.

In co-creating solutions to 'wicked problems', asking the right questions is more decisive than pursuing a single final solution. Since our universe is evolving through a complex process of non-linear causalities, RRI requires us to "come to grips with

the fact that knowledge and information, no matter how detailed, will remain an insufficient basis for guiding our path into the future" (Wahl, 2016). So, after each 'course' of the co-RRI meal, some spicy questions are asked that are meant to make you stop and reflect upon critical choices or dilemmas, as they are key to the principles of co-RRI.

Don't feel overwhelmed, there are no good or bad answers to these questions! If you follow the main steps of this cookbook, and if you feel free to replace some of the ingredients in response to your local context, your co-RRI dish can be still delicious. Perhaps, it will taste different from the others, but this is the essence of diversity.

BON APPÉTIT!
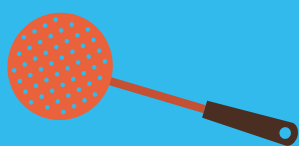
The aim of this cookbook is to facilitate the further spreading of co-RRI transition arenas in Europe and globally. By setting-up your own transition experiment, you will help to scale FoTRRIS results by nourishing a diverse and connected network of local/regional co-RRI initiatives.
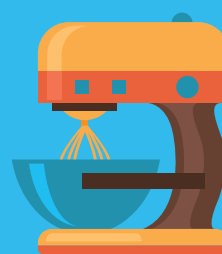
We hope you will be inspired by this framework but do not hesitate to explore many different transition pathways for your experience!

WHAT ARE WE COOKING?

An overview of the 5-course meal

A 5-course meal resulting in one (or several) **co-RRI projects** addressing a glocal challenge, directly or indirectly related to the Sustainable Development Goals. This whole meal is based upon a framework called **MISC (Mapping Innovations on the Sustainability Curve),** and each course corresponds to one of the 5 steps of the method.
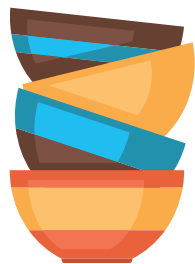
**STEP 1: STARTER
(goal setting)**
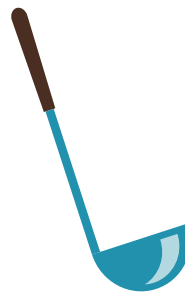
**STEP 2: SOUP
(system mapping)**

**STEP 3: MAIN DISH
(visioning)**

**STEP 4: DESSERT
(project concept design)**

**STEP 5: LIQUEUR
(outreach)**

ORGANISING YOUR KITCHEN
Bringing in the chefs!

One chef cannot cook a co-RRI project on its own, but many can! Who will be in your kitchen?

For a successful meal, the co-chefs team should be composed of **a competence cell** plus stakeholders from **the quadruple helix.**

WHAT IS A COMPETENCE CELL?

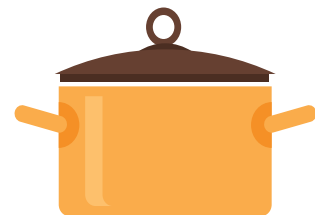A competence cell can be imagined as a three-star Michelin restaurant. It includes all the skills and local ingredients that are needed for a tasty co-RRI meal and it builds a crowd-sourced pool of recipes, knowledge and skills that emerge in a particular context and may inspire other initiatives.

In FoTRRIS experiments, the cells included around 3 to 5 members. That should not preclude you to compose a bigger cell. The role of a cell is to facilitate the transdisciplinary process at stake in a transition experiment, that is the reason why facilitation skills, and a good knowledge of this 5-step method and co-RRI are needed.

WHO CAN BE PART OF THE COMPETENCE CELL?

Experts on co-RRI to facilitate the transition experiment.

Directly involved knowledge actors familiar with the theme of the transition experiment, including experts representing groups affected but who cannot participate directly themselves (for instance, children, non-human agents, future generations).

Knowledge actors indirectly involved who possess a knowledge that may be useful to support various transition experiments (for example: representatives of local communities who are familiar with the political context, cultural sensibilities...).

Experts in project development (with specific knowledge about funding of R&I projects or other subsidies).

Co-RRI competence cells can be seen as 'pop-up' research units that look for the available infrastructure to set up co-RRI initiatives, keeping the threshold as low as possible for various actors to join. By using the FoTRRIS web platform (www.ingenias. fdi.ucm.es/fotrris/home.php) their experiments, results and lessons learned can be stored and made accessible to other competence cells worldwide.

The co-RRI competence cells function as 'liaisons' that facilitate relationships among different stakeholders with an interest in a certain theme .

DEFINITION & INVITATION OF THE STAKEHOLDERS FROM THE QUADRUPLE HELIX

The subject of your transition experiment will determine who your partners around the table will be. Ideally, it should be **a varied group of stakeholders from the quadruple helix ,** ready to invest time and personal/professional experiences in co-creation processes. The key criterion for selecting this group is that they support the goal of the transition experiment ('how to create access to sustainable energy?', for example) and that they are both from mainstream **(regime)** organisations and from 'outside the box' initiatives **(niches).**

To draw up a list of co-chefs that you will invite in your kitchen, start by making **a 'social map' of all relevant stakeholders** that may be relevant to the theme your co-RRI initiative will be working on. One condition: that they recognise the value of the goal and are willing to contribute to it, even if that means questioning their current practices.

It is important to invest enough time and energy to draw your 'social map' of relevant stakeholders beforehand; use 'snowball sampling', meaning let the relevant actors you know use their networks to bring in more **(diverse)** actors; especially make sure you include groups that tend to be marginalised yet who often are more affected by the challenges than other citizens.

The map should include **stakeholders of the quadruple helix,** both from **the regime and niches.**

REGIME ACTORS

NICHE ACTORS

List the main organisations (including researchers, companies, governance institutions) that play a role in the system and have shown an interest in experimenting with new, more responsible or sustainable approaches. They will represent the pioneers within the current socio-technical regime, and they will be able to clarify the barriers they encounter in their pioneering work.

List the main bottom-up initiatives, both by citizens, Civil Society Organisations (CSOs), local politics, independent researchers or start-ups that are exploring radically new, outside the box approaches to the theme in question. They will represent diverse ways of grassroots experimentation and they will be able to indicate what barriers keep them from scaling up and gaining real impact on the system.

To be taken into consideration concerning the co-chefs:

➜ All groups of the quadruple helix are equally represented and considered in terms of expertise (public/private sector, for-profit/non-profit sector)

➜ Regime and niche actors are present

➜ A diverse group in terms of ethnicity, gender references , local communities...

TASTY HINTS

Invite CSOs well in advance. They might need time to set up participatory processes to bring out the expertise of the citizens in question. But often these CSOs already set up actions around the theme. Think of a way to reward, compensate and valorise the time invested by the CSOs or other volunteers.

Ensure a meeting space at the local level, allowing all participants to meet physically and get to know each other, but also to continue working together during and after the co-RRI initiative. This space can be an 'unused resource': a school building, town hall, or a cultural centre after working hours, for instance.

SPICY QUESTIONS

How can the voices of those that remain out of the process still be taken into account?

How much diversity and inclusiveness is necessary for your co-RRI activity?

What about gender equality, social inclusion and openness of the process to the broader community?

How much public engagement do you really achieve?

What could be the added value of the co-RRI process for the stakeholders invited to participate?

How do you motivate all groups to join the co-RRI process? What's in it for them?

TASTY HINTS

Take care to clarify the reasons for involving specific more 'distant' knowledge actors in the competence cell. They may help you to keep an eye on the global agenda even as you focus on local problems and solutions.

Share the insights you gained from working with the competence cell experts on the FoTRRIS' co-RRI web platform: www.ingenias.fdi.ucm.es/fotrris/home.php

PRINCIPAL INGREDIENTS
To co-create RRI projects

A co-RRI initiative may have been initiated by you, or you may have been asked by a public service, company or CSO/NGO to set one up. In any case, you will need to bring together the best possible group of co-chefs that offer their knowledge as ingredients to the project. And you will need some cooking utensils to produce something good in a relatively short time.

This 5-step method is built upon the 'Mapping Innovations on the Sustainability Curve' (MISC) and systems approach frameworks, designed to accelerate transitions. We only provide a summary of it here, so we recommend that you read the complete version (see the resources section)

FOTRRIS WEB PLATFORM

A platform has been designed to facilitate the co-creation of RRI projects. Available in open access, anyone can use it. It contains a collaborative pad, a chat, and repository. As it can be tailored to follow the 5-step chronological order, it can be used to collaboratively prepare the workshops and record their results.

TIME

Be flexible in providing enough time slots for various groups of stakeholders to be able to participate, especially for those in a vulnerable position. Also make sure you plan meetings in a sensible way, avoiding overlap with care time or providing childcare during the meetings.

ENERGISERS & A NICE ATMOSPHERE

Going though these recipes will require many workshops, with some lasting a full day. For a productive working environment and good results, it is important to create an atmosphere which will stimulate friendly relations among co-chefs and facilitators. Use ice breaker games to get the group engaged. Or have a goodie bag full of energisers at hand when energy levels get low. Offer coffee breaks and lunches if an activity is planned for all day.

FACILITIES

Look for a space with a low threshold, making people feel safe to exchange views and experiences. Think of a restaurant or café! A setting with chairs grouped around tables is more inviting than an auditory with all chairs facing a podium. If you want to build in plenary moments (an expert with a presentation, or a film), just move the chairs around the tables so they can see the screen or the speaker.

FACILITATION TOOLS

Computers, handouts, Post-its and markers, supporting documents, name badges, team building activities or games, questionnaires for evaluation of workshops... Make sure you have an overview of the Sustainable Development Goals (SDGs), either as a poster adorning your wall, or as postcards which the co-chefs can keep.

FEASIBILITY

Draw up a list of potential resources and different types of contributions which can allow for the implementation of the co-created projects in the near future (for example, EU funding calls, crowdfunding, private investment...).

REWARD & COMPENSATION STRATEGIES

To valorise the input of your co-experts , especially those who are not professionally involved in the transition experiment but rather as citizen scientists, think of a way you can visualise the value of their contribution and compensate for their time and resources invested. It can be a voucher for local goods and services (bus tickets or entrance to the swimming pool or library). Things that can be offered at a marginal cost for the provider but may make a difference for the co-chefs. Or you can set up a knowledge exchange network whereby the vouchers can be used to buy other knowledge from experts or educational institutions (promoting life-long learning). Give stakeholders a certificate of participation which they can put up on their wall.
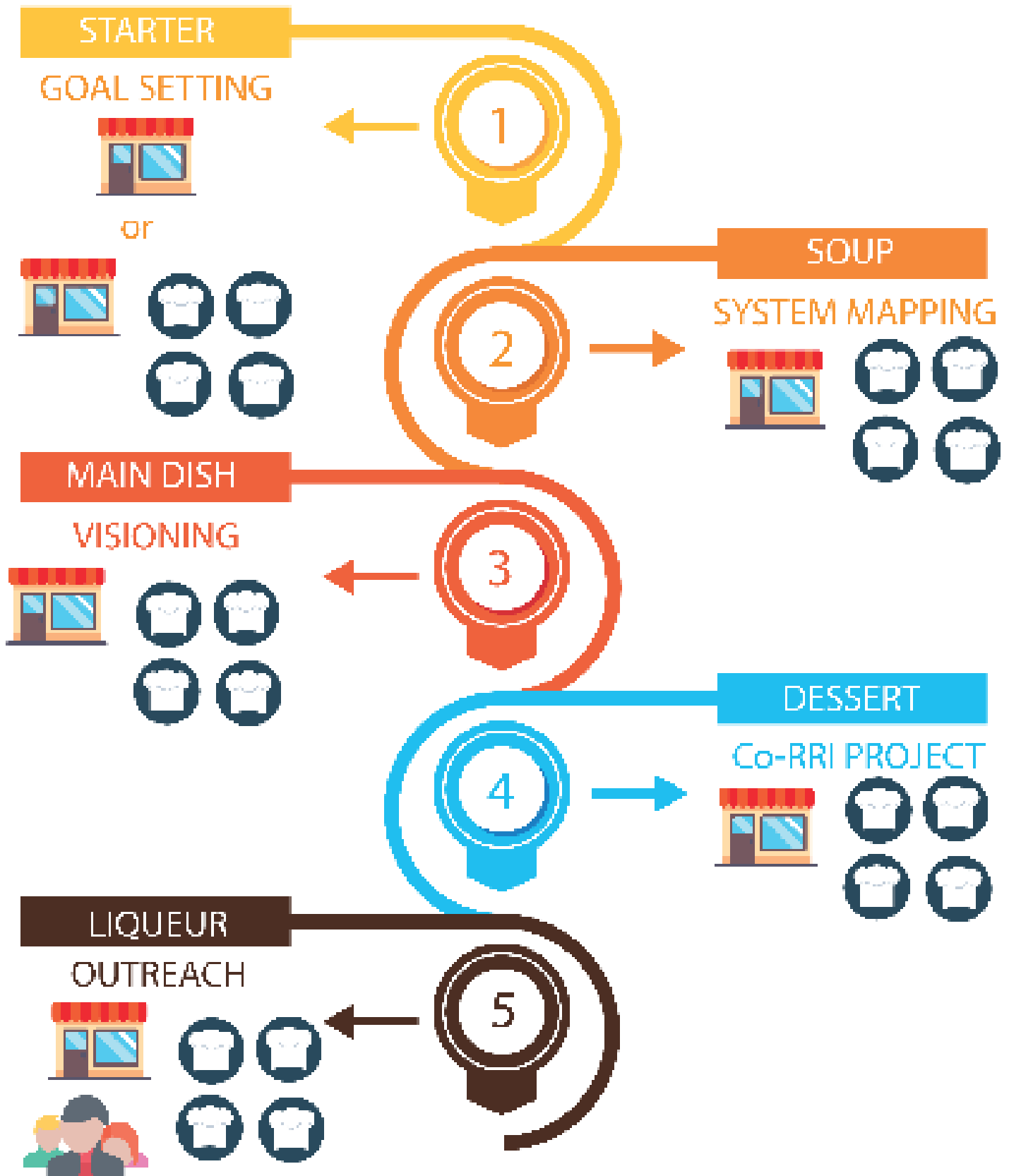
COOKING TIME
How many workshops will be needed?

These guidelines describe the 5 stages but not their length. Ideally, one workshop per stage. But in reality, for some stages you might need more than one workshop. Take your time, do not rush it through. One workshop might be two hours, another one might take a whole day, or might even spread over two days. It really depends on a number of local factors, such as:

Do the stakeholders already know and trust each other?	Have they worked together on previous projects?	Is the theme of the experimentation novel for them ?

STARTER
GOAL SETTING
or

SOUP
SYSTEM MAPPING

MAIN DISH
VISIONING

DESSERT
Co-RRI PROJECT

LIQUEUR
OUTREACH

1
2
3
4
5

TRANSITION EXPERIMENT
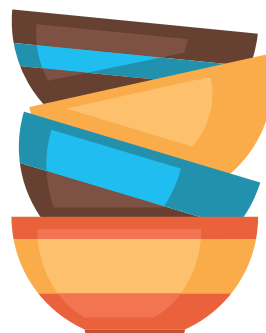
COMPETENCE CELL

QUADRUPLE HELIX

TRANSITION ARENA

RECIPES

RECIPES

1 | STARTER

DEFINING THE SYSTEM GOAL AS A FUNCTION, NOT A PRODUCT

The topic of your co-RRI transition experiment is linked to **a certain socioeconomic system,** which is currently not working well. You will apply the MISC framework to see what prevents this system from working well, and what could be changed. Your co-RRI project will be designed to make this system change. So, as a first step, **the goal of a working system has to be defined.**

The Sustainable Development Goals (SDGs) offer a broad outline of goals, and at the same time present a checklist of all the other goals that should not be negatively impacted by your innovation.

The goal will function as a compass for your co-RRI experiment, allowing you to adjust your course of action as you go. Just like a compass, the goal should not be defined in a too specific and narrow way, because that will limit your scope of possible solutions or ways to get there.

Therefore, it is crucial to **define the goal as a function, not as a product or object.** A product may be one of the solutions to achieve that goal, but is not the goal itself.

At the same time, it should be defined clearly enough for all actors to move in the same general direction and to avoid wasting time on arguments about very specific subgoals. A functional goal is like a working definition that keeps your team going rather than as a predefined description of where you want to arrive, or how exactly you want to get there.

THE GOAL SHOULD NOT BE DEFINED IN A TOO NARROW WAY

Four examples:

➜ If the goal is stated as **'guaranteeing access to healthy food for all',** your scope of possible solutions becomes much broader than if you define it as a product (for instance, GMO milk for people with allergy). This product approach focuses on a very small scale (individuals with milk allergy), and overlooks the fact that in our part of the world we may be consuming more animal proteins than necessary for us. Moreover, it does not consider ethical and long-term ecological impacts.

➜ If the goal is stated as '**guaranteeing a quality life for all in a population with a large proportion of senior citizens',** it allows to think about social innovations (including seniors) that are more inclusive and accessible for all, and might have less impact on the planet than selling technological aids, for instance.

➜ If the goal is stated as **'guaranteeing access to a good quality place to live for all people in a neighbourhood given the scarcity of building materials'**, it allows solutions such as co-living.

➜ If the goal is stated as **'guaranteeing access to healthy and sustainable food (including eating habits) in a certain geographic region'**, it enables to rethink the food socioeconomic system instead of improving health by selling food complements.

HOW AND WHEN DEFINING YOUR GOAL?

The goal of the socioeconomic system you're working on should be defined through a participatory procedure with the other co-chefs.
To do so, the competence cell can either:

Propose a first definition, based upon past experiences, to be refined with all co-chefs during the 'Soup workshop'. Or, can contact the co-chefs before the 'Soup workshop', to get their views on the system's goal, and then refine it during the 'Soup workshop'.

Do it in a fully co-creative way, dedicating one full workshop to this aim, before the 'Soup workshop'.

CHARACTERISTICS OF THE SYSTEM GOAL

Please make sure that your system goal fulfils all the criteria below:

Describes a desirable situation	Relates to or covers a glocal challenge	Allows access to a service or function rather than possession of goods
Is always constructive	Is defined broadly to include many possible innovations	Is functional and pragmatic and defined in concrete terms
Everyone understands and supports it	Should not be impacted by the project's activities	

TASTY HINTS

Always include the perspectives of those actors that are marginalised in the regime. Even though they are not recognised as researchers or innovators in the current R&I system, their knowledge is crucial for RRI to be innovating and inclusive at a systemic level.

Do not allow this phase to turn into a philosophical discussion!

SPICY QUESTIONS

How to avoid seeing this systemic goal as a static fact?

**How to avoid that the focus narrows down too much, losing sight of the global perspective?**

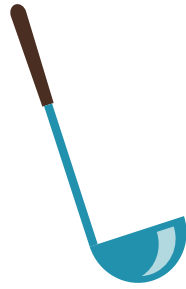**How to leave room for new insights that would improve your project but would require to change it?**

Who can bring in the outside perspective?

Do stakeholders feel that their contribution to this goal is important and valued?

Is the goal shared by all the stakeholders? Accepted by all of them?

RECIPES

2 | SOUP
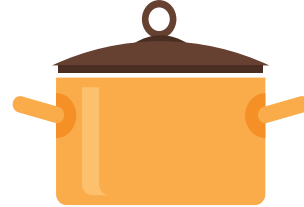
SYSTEMS MAPPING

This second course is about elaborating, in **two parts,** a map of the system under consideration. This map will help you reflect on how it behaves with regards to sustainability and why. To do so, you will map the system around **a 'curve of sustainability'** (part 1). Then, you will understand the ins and outs of its behaviour (part 2).

Given the complexity of our societies and of the planetary context, each theme or sector is influenced by and has an impact on other domains. To give you an example, an antibiotic not only fights a disease, but also it leaks into the soil where it might cause new health threats.

So, this system map, or **MISC-map,** is here to see these interlinkages. One of the reasons why the current systems do not work well is because they have been designed without taking these interlinkages into account.

However, **your MISC-map doesn't have to be complete to be useful,** in fact it is very difficult, if not impossible, to visualise every element that influences a system's behaviour. The main objective is to help you and your co-chefs understand the systems' dynamics leading to lock-ins and get a grasp of what transitions are needed to restore sustainability.

PART 1 - AIM: to introduce the exercise & co-define a system map

1 EXPLAIN THE CURVE OF SUSTAINABILITY

Sustainable systems depend on maintaining a balance between **efficiency** (or ascendency, streamlining) and **resilience** (diversity, outside the box thinking, creativity), whereby resilience is slightly more important than ascendency. Try to do this by using examples relating to the theme you will address but avoid classifying agents as either resilient or efficient: most organisations have some resilience, and most innovations have some efficiency. Yet, innovators will often situate themselves at the resilience side of the curve, and explain why external factors (rules, regulations, power games...) keep them from becoming more mainstream. Likewise, regime actors will point out that their efforts at changing course are thwarted by external mechanism (financial pressures, short term reporting...).

2 INTRODUCE THE SYSTEM GOAL

According to how you ate your starter, the goal can be already co-defined, in case you had a preparatory workshop for that, or you will have to co-defined it with the co-chefs at this stage. Remember : your goal shall address a global challenge.

3 ADD REGIME ACTORS

List on the 'efficiency-side' of the curve, the main regime organisations (governance institutions, big market players...) that play a role in the current system (co-define the regime). Also, explore what other institutions or mechanisms determine the behaviour of these organisations (legislation, international politics, party politics...).

4 ADD NICHES

List the main niches playing a role in the system **(co-define niches).** Step 3 and 4 can be an eye opener, for system agents might not always be aware of the roles of each other.

5 DRAW FEEDBACK LOOPS

Draw feedback loops (balancing and reinforcing feedback loops) to indicate how the niches and regimes are stuck, or what allows them to break out. Use blue arrows for reinforcing loops **(increasing efficiency)** and green arrows for balancing loops **(increasing resilience).** Remember that sustainability depends on a (governed) balance between green and blue loops and that both are necessary.
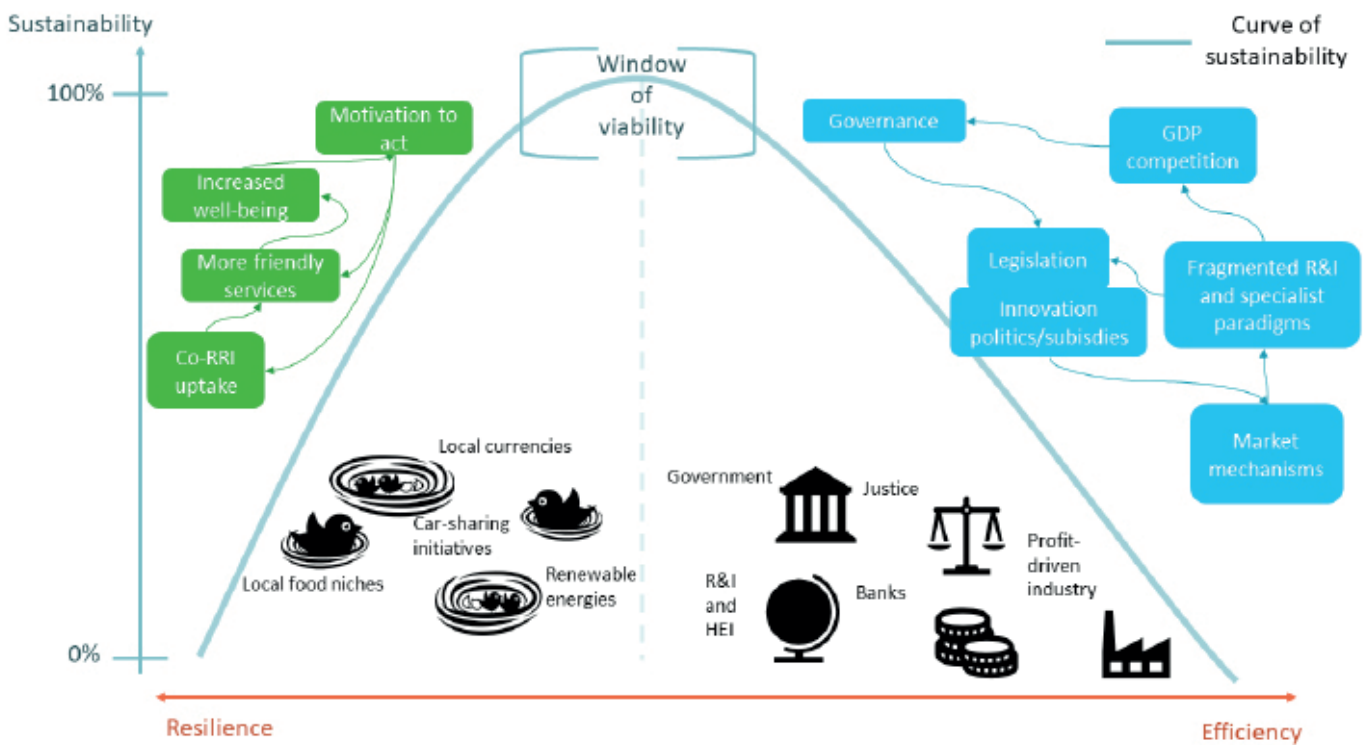
OUTCOME

System map of the stocks (actors, laws, mechanisms) and flows (relationships, influences, dependencies, feedback mechanisms) relevant for your goal.

MISC-MAP SAMPLES
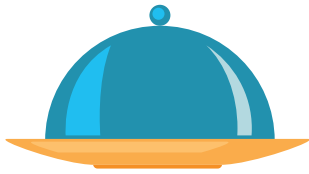
That is how your MISC-map could look like, both after part 1 and 2 of the Soup course. Note that these are basic examples, your MISC-map can be more detailed and looking differently, as you and your co-chefs will co-define the socioeconomic system under consideration.

Sustainability

100%

Curve of sustainability

Window of viability

Motivation to act

Increased well-being

More friendly services

Co-RRI uptake

More visibility

Sustainable communities

Lack of resources, inadequate frameworks, prejudices

Local currencies

Car-sharing initiatives

Local food niches

Renewable energies

0%

Opening regime's organisations to niches

SDGs

Governance

GDP competition

Legislation

Innovation politics/subisdies

Fragmented R&I and specialist paradigms

Market mechanisms

New economies (circular, collaborative, ...)

Shareholders' pressure, consumerist culture

Government

Justice

R&I and HEI

Banks

Profit-driven industry

Resilience

Efficiency

TASTY HINTS

It is not important for the map to be scientifically correct or exhaustive. The main function of the map is to allow the co-chefs to take a broader look at the problem and to understand underlying drivers. This will allow them to tackle the root causes of the problem and avoid just treating the symptoms.

PART 2 - AIM: to explore the lock-ins and leverages

1 REGIME LOCK-INS

Ask the actors that represent regime organisations what keeps them from really contributing to the sustainable system goal and add those factors to the map. These factors may be situated at an institutional, legal, political or cultural level (ads or media, commercial pressures, legal frameworks...).

2 NICHE LOCK-INS

Similarly, ask the actors that represent the niches what keeps them from having real impact on the system.

3 JOIN FORCES

Ask the co-chefs to brainstorm on how they could join forces to obtain the chosen systemic goal, and to map what factors are currently hindering such a collaboration.

4 FIND LEVERAGES

Groups of co-chefs will brainstorm on leverages, and all ideas will be added to the map (as a growing ecosystem of solutions).

OUTCOME

A MISC map, as a common platform, either for direct collaboration or for policy recommendations.
These recommendations in turn can be presented as a leverage to political actors or public services which support transition, but often lack the access to co-creative platforms where bottom-up input guarantees community support.

TASTY HINTS

The leverages may be readily available to the actors involved in the co-RRI project, or they may require political support. In that case, establishing a common platform for advocacy or policy recommendations may be an accessible leverage.

In part 2, steps 1 and 2 can be done in plenary. Steps 3 and 4 should be done in small groups of no more than 12 people.

SPICY QUESTIONS

What kind of facilitation can lead to true co-creation instead of a 'blame game' (niches are naives, regimes are sharks)?

How to keep the spotlight on what positive impact co-chefs already have on the system and what has allowed this to happen?

Does the mapping of stocks (actors, laws...) and flows (relationships, influences, feedback mechanisms) revealed other stakeholders not yet involved? Make sure to include them in the map!

How to make co-chefs focus on solution-oriented dynamics rather than on powerlessness and frustration?

RECIPES

3 | MAIN DISH

VISIONING A BETTER FUTURE

AIM: to envision a new future and the path to get there

1 **LET YOUR IMAGINATION SPEAK**

Ask co-chefs what the world (their city, neighbourhood, school…) will look like once the transition is achieved, or the goal is reached. Ask them to describe it as if they were walking through the place and tell you what they see: who does what, who talks with whom, what the streets look like, what people say, what about water, birds, air, weather, sound…?

3 **PRIORITISE**

Prioritise the research topics and innovation activities according to individual co-chefs' preferences.

2 **DISCUSS ROADS TO THE FUTURE**

Co-chefs use the MISC-map drawn in the previous step to discuss what needs to be done to achieve this envisioned future: upscaling viable alternatives, installing governance to strengthen resilience, increasing the efficiency (and decreasing the overhead) of niche innovations, without losing their agility, cooperation among various actors and sectors… An inventory of research topics and/ or innovation activities is collected.

OUTCOME

A vision of the desirable future.

A priority list of R&I activities as ways to get there.

SPICY QUESTIONS

How do you strengthen co-chefs' capacity to think outside the box?

What facilitation techniques do you know that can help them to visualise different roles or contexts?

What formats or tools would allow co-chefs to connect elements of the vision to already existing initiatives, projects...?

RECIPES

4 | DESSERT

PROJECT CONCEPT DESIGN

AIM: put together your co-RRI project

1 CHOOSE PRIORITIES

Priorities can be determined according to the expected impact of the action and its concrete feasibility. Is there sufficient support for it in the community? Do you need political support and are you likely to get it? Is a big budget required or can the goal be achieved with a minimal financial budget and a large-scale use of alternative valorisation (knowledge vouchers that stimulate the exchange and co-creation among all citizens)?

2 LIST RESOURCES

Define the resources needed for each action or step and make a list of where those resources can be found. Do not only think of money as a resource, but also consider natural of physical elements (an empty building, an abandoned park, underused public resources...), as well as human capacities. For instance, in a neighbourhood with high unemployment, people have time and are motivated to collaborate in a transition initiative such as community gardening.

3 SCHEDULE

Define the timing of each action or step and check its congruence with other agendas (school holidays, election periods, deadlines for R&I calls, other relevant local events...).

4 MEASURE SUCCESS

Based on the visioning course, you can ask co-chefs to describe in concrete terms how they will know the project was successful. This may result in qualitative as well as quantitative indicators. The first are often more difficult to measure, but that does not make them less relevant or important. Moreover, allow co-chefs to develop indicators on the envisioned goal (traffic safety has increased as more people and children use bicycles for daily transport), but also on the leverages (all political parties promote cycling as a means of daily transport, or bicycle repair services or skills are available in every neighbourhood). Lastly, even if the envisioned outcome has not been reached, other unforeseen impacts may have been realised, such as new partnerships have been built, and companies are increasingly aware of societal pressures and expectations.

5 DEFINE RISKS

Define risks and propose plans for risk management. Keep in mind that transition experiments are inherently risky since their goal is to innovate while being fully aware of the unpredictability of the future in our complex and nonlinear (social as well as planetary) system. In that sense, it may be more appropriate to replace the term **risk management** with **boundary critique.** If the goal is not achieved as planned or within the foreseen timeframe, this can teach you something about blockages you overlooked. As such, it allows you to broaden your map and redefine its boundaries. Co-RRI is always an iterative process full of balancing and reinforcing feedback loops!

6 PLAN COMMUNICATION

Remember that the transition arena is not there to pursue its own private goals, but to contribute to sustainable goals for society. They can be seen as the laboratory or the think tank that explores what can stimulate the transition of society towards a new paradigm. It is therefore crucial that the results – the successes as well as the lessons learned – , are communicated with the local community, its leaders and its entrepreneurs. Also the learnings should be shared on the FoTRRIS web platform so as to strengthen the co-RRI community worldwide.

OUTCOME

A realistic and achievable project concept with innovation activities - supported by research - with the ambition of contributing to systemic change in a given domain.

SPICY QUESTIONS

How to guarantee their involvement throughout the co-RRI project?

Could you define future contributions of each of the co-chefs to the research and innovation project itself already in this stage?

Or should contributions be envisioned and adjusted as the process takes shape?

What will be the implication of each stakeholder in the project development?

How do you make sure the academic expert considers himself/herself as a co-expert (dependent on collaboration)?

ICING ON THE CAKE

Co-chefs of your workshops have specific interests in these activities, and you should think in advance what will motivate them and how you can valorise or reward their input. For this, different options are available: compensation, remuneration, acknowledgement...

SPICY QUESTIONS

How can you compensate the contribution of each co-chef without letting your budget explode?

How will you ensure the open character of the outputs and protect them from privatisation and enclosure?

Is there a Creative Commons licence you can use?

As the output is the result of a shared endeavour, how can you limit the unfair appropriation of the results?

RECIPES

5 | LIQUEUR

OUTREACH & VALIDATION

That's it, you have made it through this meal! The liqueur part is always a convivial one, so that's the moment to share the experience and results of your co-RRI transition experiment with others. Even if co-RRI processes focus on local manifestations of global challenges, their impact may be multiplied if the results are brought to a broader platform for collaborative validation and outreach.

Organise an 'Outreach & Validation workshop'
➜ Share knowledge, ideas and projects generated by the co-RRI transition arena
➜ Provide space for upscaling and continuity
➜ Make a validity check on the knowledge generated

Participants
➜ Members of the competence cell and the other co-chefs that want to play a role in this last phase
➜ Other relevant actors (the media, higher education institutions, NGOs, companies, policymakers in the field of circular or generative economy, international cooperation, social inclusion...), with different expertise to assess the knowledge generated. Importantly, bring in the actors that can be interested in participating in the new project(s), or that can support it with resources.

SPICY QUESTIONS
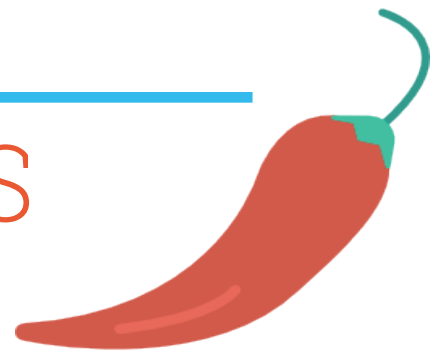
How to make sure broader stakeholder groups understand what sustainabilityimplies?

Have you addressed all relevant stakeholders to upscale the uptake of your Co-RRI project?

Who else is implied or affected and should be included in the next steps?

What this involves in terms of a needed paradigm shift and transition towards co-RRI?

Is there a willingness to replicate it in other communities, cities or regions?

Is this experiment relevant for other actors, cities, communities?

JOIN
THE CO-RRI
COMMUNITY

Follow us on Twitter !

Visit our website for more information

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www.fotrris-h2020.eu

RESOURCES

& REFERENCES

MISC FRAMEWORK

Snick, A. (no date). Mapping Innovations on the Sustainability Curve.
Available at http://fotrris-h2020.eu/material-for-uptake/

SYSTEM THINKING APPROACH

Meadows, D. H. (2008). Thinking in Systems: A Primer. Chelsea Green Publishing.
Midgley, G. (2000). Systemic Intervention: Philosophy, Methodology, and Practice.
Springer US. Retrieved from www.springer.com/la/book/9780306464881
Wahl, D. C. (2016). Designing Regenerative Cultures. Axminster, England: Triarchy
Press Ltd.

CO-RRI WEB PLATFORM

Subscribe and log-in at www.ingenias.fdi.ucm.es/fotrris/home.php
➔ **Deliverable D2.1:** Design and specs of the co-RRI web-based platform
➔ **Deliverable D2.2 :** Co-RRI web-based platform
All two available at http://fotrris-h2020.eu/deliverables/

User guidelines – short version
Available at http://fotrris-h2020.eu/material-for-uptake/

FoTRRIS' TRANSITION EXPERIMENTS

➔ **Deliverable D3.1 :** Co-RRI project concepts
➔ **Deliverable D3.2 :** Evaluation report
➔ **Deliverable D3.3 :** Validation report
All three available at http://fotrris-h2020.eu/deliverables/

REWARDING & COMPENSATION STRATEGIES

➔ **Deliverable D2.4 :** Financing, rewarding and compensation strategy
Available at http://fotrris-h2020.eu/deliverables/

COMPETENCE CELLS' ACTIVITY MODELS

➔ **Deliverable D2.5 :** Activity models
Available at http://fotrris-h2020.eu/deliverables/
Guidelines : How to set your competence cell
Available at http://fotrris-h2020.eu/material-for-uptake

GLOSSARY

COMPETENCE CELL

A small organisational unit, which functions as a local innovation platform that encourages various knowledge actors from science, policy, industry and civil society to co-design, co-perform, and co–monitor co-RRI-projects that are attuned to local manifestations of global sustainability challenges.

FoTRRIS

Fostering the Transition towards Responsible Research and Innovation Systems (FoTRRIS) is a Horizon 2020 research innovation action project investigating how R&I can contribute to tackling the grand societal challenges, and how the R&I system can join the partnership for the Sustainable Development Goals (SDGs) by joining forces with all societal actors, including citizens, political leaders, civil servants and entrepreneurs.

QUADRUPLE HELIX

A quadruple helix is an intertwined structure of four strands that together can steer development. In co-RRI –tackling complex and intertwined problems – this refers to the collaboration of citizens (CSOs, citizen scientists, social innovators…), policymakers (or public services), entrepreneurs (including green financing initiatives) and scientists. All of them being equally important, bringing their own kind of expertise. (www.ec.europa.eu/digital-single-market/en/policies/open-innovation)

Co-RRI (Co-Created Responsible Research & Innovation)

This is a concept that does not substitute former definitions and principles of RRI. It attempts to supplement them in order to clarify our normative position and our understanding of RRI principles. Co-RRI is characterised by its normative assumptions, content, its approach and its process. The underlying values co-RRI is committed to are : ecological sustainability, social justice, acknowledgement of different forms of knowing and social inclusion. Co-RRI addresses specific local manifestations of grand societal challenges. Its characteristics are : transdisciplinarity, reflexivity, systemic thinking, collaboration, co-creation, transparency, awareness of making choices with ethical and political implications, inclusiveness, responsiveness, long-term, on-going process.

GLOCAL CHALLENGE

The local manifestation of a global challenge is the way a global issue (such as climate change, migration, extinction or pollution) manifests itself in a given context or community. The locally available needs and assets determine what can and what needs to be done locally to address the global issue.

RRI (Responsible Research & Innovation)

An approach that anticipates and assesses potential implications and societal expectations with regard to research and innovation, and with the aim to foster the design of inclusive and sustainable research and innovation. (www.ec.europa.eu/programmes/horizon2020/en/h2020-section/responsible-research-innovation)

SDGs (Sustainable Development Goals)

A global agenda for sustainable development defined by the UN and endorsed by 193 countries. If RRI is to co-create solutions for big challenges, it is also to become a member of the partnership for the SDGs.

TRANSITION ARENA

A group of people working together to tackle a glocal challenge. They consist of four types of actors: citizens (or civil society organisations), public services and/or political leaders, entrepreneurs, and responsible researchers.

TRANSDISCIPLINARY

Refers to the fact that the complex and non-linear nature of the current global problems can no longer be solved by separate disciplines, or by a group of various disciplines (interdisciplinary or multidisciplinary), but requires the engagement with non-academic societal actors (citizens, politics and entrepreneurs) → see Quadruple helix

TRANSITION EXPERIMENT

An experiment to support the transformation of present-day (specialist, competitive) research and innovation strategies into systemic, transdisciplinary co-RRI-strategies.