RIS3

Governance Guide

S^3 Platform

Quadruple helix
governance

Public
governments

Private
businesses

Civil
society

Knowledge
institutions
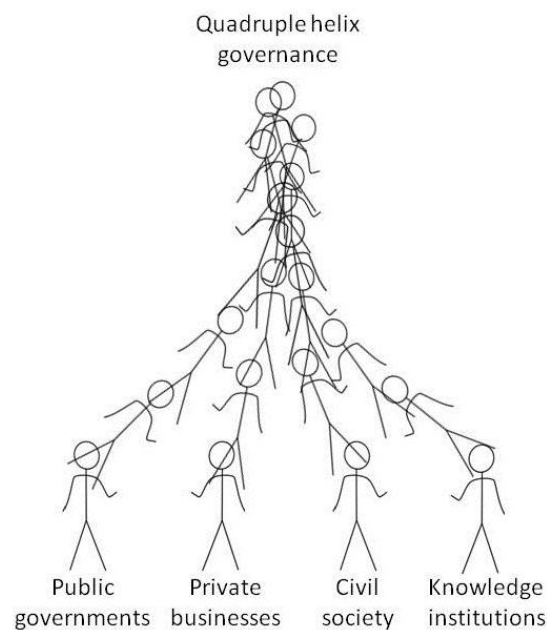
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For the S3 Platform and the Northern Netherlands Alliance

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1. Introduction to RIS3 and governance

In the practice of building a Research and Innovation Strategy following Smart Specialisation (RIS3), many regions[1] encounter the same challenge: how to arrange for the multi actor governance incorporating private businesses, public governments, knowledge institutes and other societal stakeholders, to co-create the strategic plan and the operations to carry it out?

RIS3 intends to encourage this quadruple helix of private businesses, public governments, knowledge institutes and other societal stakeholders in regions and member states to co-create an innovation strategy for integral socio-economic development of a region.

Using the quadruple helix actually implies that you reverse the starting point of planning and programming from thinking from "interest" to thinking from "needs". Starting your collaborative acting from meeting economic or social needs is very different than starting from your own interest. By incorporating societal stakeholders, for instance from healthcare, welfare, education, culture and environmental groups, the power driven process of taking and exploiting interest positions is reduced.

The European Commission promotes a specific process and a list of requirements for making RIS3 in order to make individual RIS3 plans more or less comparable, which helps to assess their quality and supports future interregional cooperation.
This specific process for designing a RIS3 is called the Entrepreneurial Process of Discovery (EPD)[2]. EPD challenges all connected actors to redefine the major innovation areas in the regions and the capacity to really exploit them. Furthermore, it urges to be selective and brings new focus to the regional development investments in time, money and effort.

After the period of the entrepreneurial process of discovery and making a RIS3 strategy, most of the efforts are focused on sustaining the collaborative energy of all the involved actors at a necessary high level and transmitting that positive energy to the operational period.

Of course, not all European regions and member states have the same approach to RIS3.
Some see it as the means to get ERDF funding for the new programming period 2014-2020. Others see it as a strategy for research and innovation in which knowledge institutes and a part of the knowledge intensive private sector are leading. More and more regions, however, approach RIS3 as an integral development strategy for the entire region or even see it as the regional socio-economic transition strategy.
These differences in approaches are by nature reflected in the way in which the RIS3 is created and in how intense and inclusive the governance of the operational period is organised.

This guide is targeted at all these regional approaches but will especially try to accommodate those regions that want to make the most out of RIS3 and smart specialisation.
It goes beyond a strategy. It focuses on the next common issue in the European society of the Europe 2020: how to arrange for the spirit of the policy into its operational phase. It is this phase that has to

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[1] The Northern Netherlands keeps in contact with regions across Europe, mutually exploring possible partnership, collaboration and market opportunities.
[2] D. Foray, P.A. David and B. Hall, "Smart specialisation: the concept", in Knowledge for Growth: Prospects for science, technology and innovation, Report, EUR 24047, European Union, 2009; D. Foray, P. A. David and B. Hall, "Smart specialisation: from academic idea to political instruments, the surprising career of a concept and the difficulties involved in its implementation", Working Paper series, 2011-01, Management of Technology and Entrepreneurship Institute, EPFL, 2011

live up to the expectations of the Europe 2020 Strategy and all the national, regional and local policies that combine with it.

The question is, how to manage this operational phase to make it effective, with efficient spending of all the invested public and private funding, effort and energy.

In a modern networked, multi-actor or multi-stakeholder society this is the job of governance, i.e. governing together.

Pages 25 and 38 to 42 of the RIS3 Guide of May 2012 (final)[3] deal with governance.
They point in general at ingredients needed for governance of RIS3 in the conception phase and after.

Governance is basically a sophisticated form of shared process management between actors all striving towards a shared future outcome.

A RIS3 on paper is one thing, but an operational RIS3 with an even growing number of quadruple helix partners really investing in those areas where the regional challenges can be solved, needs a clever and effective governance to be installed. Such an operational strategy, combined with a multi-fund approach and NOT primarily governed by one of the quadruple helix partners, like governments traditionally do, poses a real governance challenge.

The content for this governance guide was found by exploring the necessary ingredients, building blocks, methodology and contra indications, as found in the regions of Helsinki and Valencia, the Economic Boards of the West of the Netherlands, the Northern Netherlands Alliance and the universities of Rotterdam, Utrecht, Catalunya and Groningen, the North Sea Region, the Committee of the Regions and last but not least, ENoLL, the European Network of Living Labs.

This guide can be seen as a 'governance cook book', of which different European regions in their specific cases can benefit by adding their regional 'flavour' of culture, language and governance history.

It will not prescribe a certain type of governance. A good cook book delivers the basics, but the 'taste' has to be added by the cook. Consequently, it delivers a great variety of dishes for different situations.

This cook book is as much as possible made accessible for users across the European society and is culture independent, which supports a smooth dissemination. If there are constructive ideas on how to enhance its quality, please send your ideas to the S3 Platform.

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[3] Available at: http://s3platform.jrc.ec.europa.eu/s3pguide

2.   Governance aspects of RIS3

Although some regions have built up experience with creating and operating a regional strategy as a collaborative process of a great number of participants, the RIS3 process is a new form of plan process with its own new challenges. Especially the focus on societal needs, the entrepreneurial process of discovery, the complex integrated development challenges and co-investment schemes, are challenging.

The challenge of RIS3 is to create a process of reaching participants, who can give platform and support to the strategy in an entire region in a period of seven years. It is about giving every participant an opportunity to reflect their goals, concerns and visions in the strategy. Last but not least, it allows for hard choices in smart specialisation to bring focus.
Important here is to realize that a choice for smart specialization in a certain sector or theme is not an exclusive one. On the contrary, it should always be an inclusive one, choosing a theme or a sector that has the greatest power and potential to "connect" all other functions in the regional society. It is primarily a 'smart' choice to focus and still be highly effective with scarce means.

It should:
1. Create local value for citizens, SMEs and basic societal qualities of life like health, talent development and sustaining ecology. 'Societal challenges' will work fine here.
2. Enhance regional complementarity . Specialization here actually fuels collaboration between regions and brings a shared internationalization perspective within the region because regions learn that they need each other.
3. Foster international competitiveness on a global scale, although only some regions will reach this ambition.

All three points ask for governance on different levels.
That process can be painstaking if not managed well but really energizing if organized with a good understanding of network management, strategic collusion and governance.

Furthermore, you could argue that you never know if all necessary participants for the coming years are 'on board'. This indicates that the RIS3 building process and the operational process shall be open processes in which new participants can have their share in forming and functioning of the strategy.
A strategy never implies fixing a plan for the future. On the contrary, it should be a flexible plan that allows for accommodating changes of environment as well as participants and relations within the strategic collaboration.
Besides, there is a challenge of keeping participants connected and active over the period of the strategy, at least in the part they are involved in.

A next governance aspect deals with aligning the points of view of the participants to create one strategy and one operational process, again keeping the necessary flexibility of an open plan process. Every participant stems from her or his own organization with its own targets, rules, culture and behaviour. This pre-selects what she or he looks at and in which colours she or he sees the reality. It is possible to make a "grey" mainstream out of varying perspectives of participants.
New governance methodologies leave, however, space for a more colourful perspective with comfort zones and attractive edges for every participant.
The governance arrangements should therefore enable the actors to keep ownership of their own interests while allowing for participating in common development plans and actions. Only then governance adds value (collaboration is then truly a new competition). You could compare it to climbing the Mount Everest. Mountaineers cooperate and help each other best when making sure

they are in their best shape and stay healthy to support each other to the top, not by telling their colleagues what to do.[4]

With continuously changing role of public government, another governance aspect of RIS3 comes into play. The change from a directing role of government into a more equal collective leadership position, of course with special interests and powers, results in a governance without a 'one point of organization and management'. Indeed, this rather powerful change of government's role is a reason why governance is gaining attention over government.

Without a single point of organization, a collaborative process has to find its form of organization and process management. Multi actor steering demands a care of most of the actors if not all. What is the right direction, what is good steering, what are the essential participants form questions that can no longer be answered from one point or role.
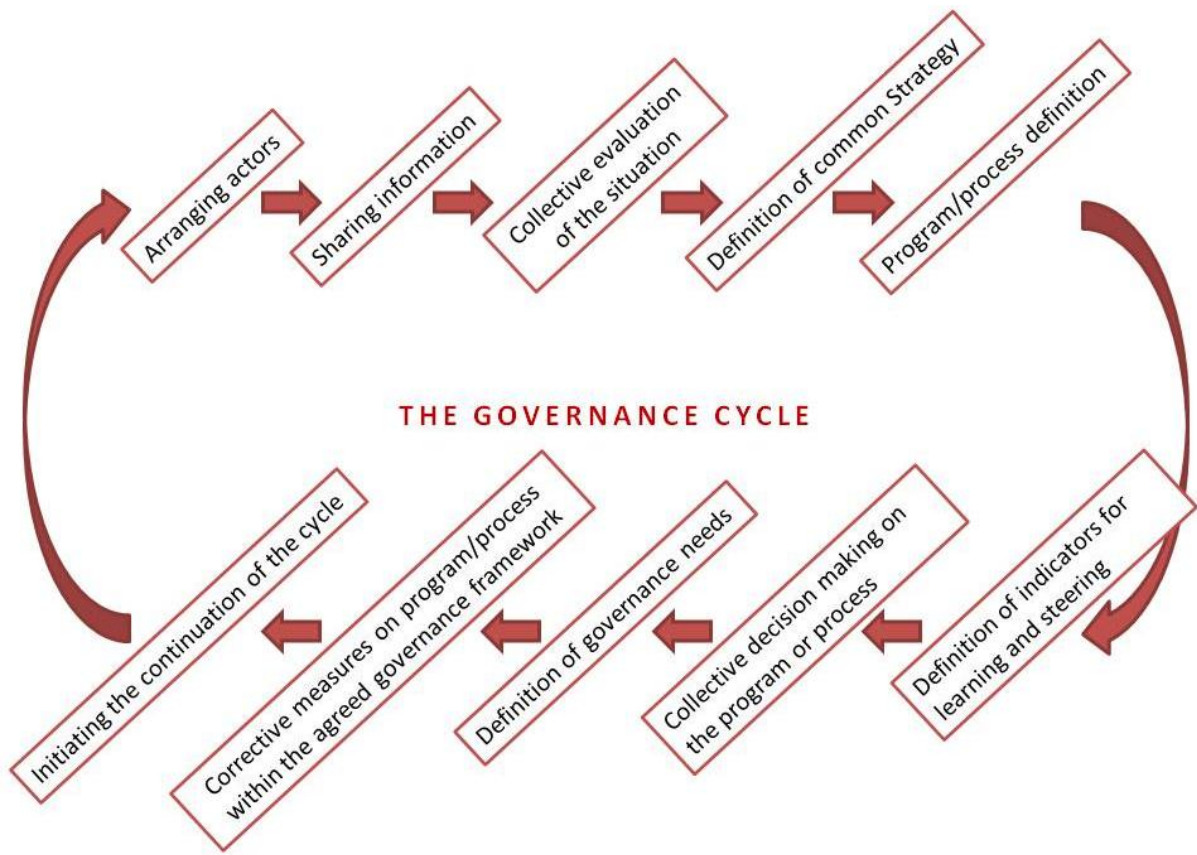
Another governance aspect of RIS3 arises from its operational focus on multiple investors. To govern an operational RIS3 phase, stakeholders from different organizations have to align and organize their work. There could be a need for leadership or decision making with only short timeframes to decide. Here the aspect of mutual trust adds to the equation. The challenge is how to reach such a level of collaboration in which mutual learning is essential for accomplishing next steps in governance maturity.

When looking at the multi actor governance in its daily functioning, we often see the following process outline, which is a cyclic repetitive process characterized by:

1. Arranging actors that are willing to invest in implementing the strategy (most of all starting with some frontrunners and early adopters), but every next stage should allow new actors to enter the scene or existing actors to leave it as well;
2. Sharing information among all the stakeholders within and outside the strategic network about the current state of development and existing and expected new opportunities or threads to get a shared perspective and a shared reference map;
3. Collective evaluation of monitored information leading to collaborative learning;
4. Defining a common strategy, setting main targets and main lines of approach and outlining allocation of resources;
5. Defining an operational program or a process to carry out the strategy with (re)new(ed) operational targets and agreement on how they connect to the strategy (in RIS3: defining the operational program/process that connects to the RIS3);
6. Defining indicators for learning and steering of the processes concerned;
7. Deciding about the program and the investments by all relevant actors and signing an agreement on subsets of the program or process or on every project and development process;
8. Abstracting the governance needs for the program/process and its subsets and formulating a governance agreement and formally reinstalling governance;
9. Following indicators and societal reactions to the operational processes and taking corrective measures within the agreed governance framework; proposing redefinition of parts of the program or process and initiating new projects and processes;
10. Initiating a (periodical) repetition of this cycle with a possibility of changing the setting of actors in a meanwhile.

There is no need to strictly follow all these steps. Governance can be arranged more loosely and less formally explicit. But even in such situations these steps are present in a more implicit form.

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[4] Jan Wester, Lead strategist TNO, The Netherlands

THE GOVERNANCE CYCLE

Arranging actors → Sharing information → Collective evaluation of the situation → Definition of common Strategy → Program/process definition →

Definition of indicators for learning and steering →

Collective decision making on the program or process → Definition of governance needs → Corrective measures on program/process within the agreed governance framework → Initiating the continuation of the cycle →

3. Who is in charge when no one is? Quadruple helix governance

To start with, one of the characteristics of governance is that it is a form of a stable multi-actor steering. In multi-actor steering, neither a natural leading actor nor a governing power can decide solely about targets and processes. But not every process can wait until it is decided by the means of democratic choice.
There are several proven options available to make governance work, even in a quick and flexible way.

An old Dutch option is to establish a cooperation between all participants which installs a board from their ranks. A general assembly chooses the strategic lines while the board has a limited mandate to make day to day operational choices and to organize the strategic process itself.

This option shows that the same way in which states are governed, with an assembly and an appointed government, can also apply to more entrepreneurial multi-actor networks including enterprises or ventures.
One can ask if and why the existing public governments cannot take up this multi-actor governance. They indeed represent all parts of society and have an elected governing body controlled by a general assembly. The answer is indicated by several facts: governments are in general not allowed to take risks with public money, they cannot invest in unequal markets with unequal profit opportunities, they lack entrepreneurial spirit and they became so largely determined by their massive public administrations that the power of representation is fading. An entrepreneurial undertaking or a multi-actor innovation process demands risk taking action by many participants, among which the future profits are in general not equally shared, and who need agility in making strategic and operational choices to be able to seize unique opportunities. On the contrary, in public administration it is many times the case that "the way between dreams and deeds is blocked by rules and practical objections".

A second proven option is described by the Dutch Research Institute For Transitions (DRIFT- Erasmus University Rotterdam)[5]. From several big cases of multi-actor, multi-level governance DRIFT shows the functioning of 'transition arenas' where multiple participants gather to pursue their own goals within a common agenda. These arenas can be either grown bottom-up (Lipsky, Porter, Hjern, Hull in the eighties) or managed actively top-down, mostly by frontrunners or public (government) bodies (Pressman, Wildavsky, DRIFT).
The debate between these 'governance schools' and the upcoming intermediate third generation school is mapped by Hill and Hupe[6] and Pülzl and Treib[7]. However, this debate does not reach a conclusion.

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[5] DRIFT, Erasmus University Rotterdam: http://www.drift.eur.nl/
[6] Michael Hill, Peter Hupe, Implementing Public Policy: Governance in Theory and in Practice, SAGE Politics Texts series, 2002
[7] Pülzl, Helga, Treib, Oliver, 2006, "Implementing Public Policy", in *Handbook of Public PolicyAnalysis: Theory, Politics, and Methods*, (Eds.) Fischer, Frank, Miller, Gerald G., Sidney, Mara S., vol. 125 of Public Administration and Public Policy, Taylor & Francis, Boca Raton, FL. Forthcoming
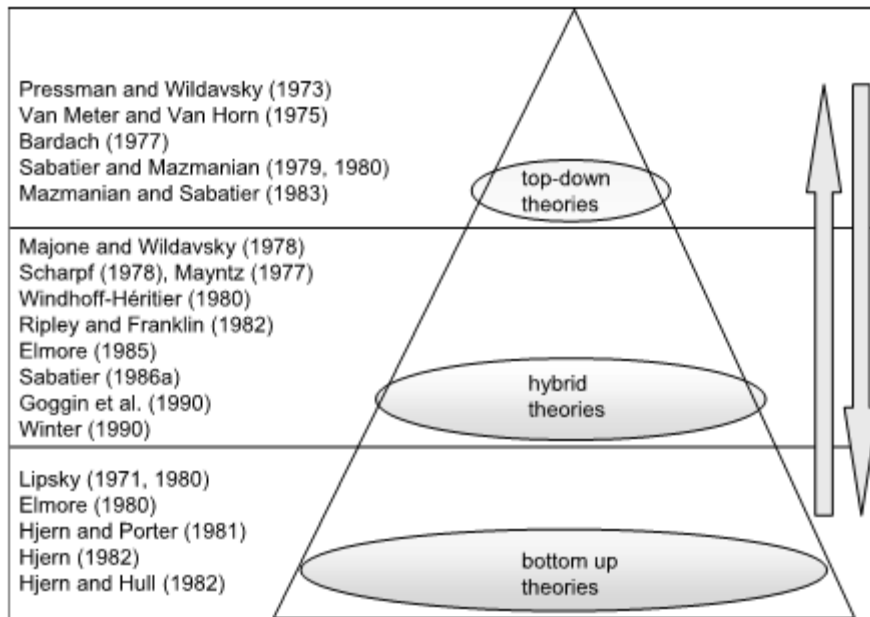
FIGURE 7.1 Top-down, bottom-up, and hybrid theories: key contributions.

A third important option was found during twelve years of implementing modernization programs in the region Valencia in Spain.

Originally initiated by the Generalitat Valenciana, the regional autonomous government, a series of four year consecutive strategic modernization plans was carried out in conjunction with large scale private sector investments, knowledge institutes and a range of societal stakeholders.

In these multi-actor programs the governance form chosen was that of a steering board consisting of front running representatives of all societal cornerstones, a working organization installed as a entrepreneurial semi-public body and a contracted network formed in teams around the steering board members. A separate council of experts, not involved in implementing the programs themselves, was used for reflection and formed an independent advisory organ.

This governance structure appeared to be entrepreneurial and flexible enough to cope with half yearly strategy evaluations and forthcoming revisions. It allowed for the multi-actor steering and was far enough from a governmental like body which enabled quick entrepreneurial private investments and profit making.

Despite all the dispersed experience and theories, there is no real science on governance that shows the way. There may not be a best way, but for sure there are 'working ingredients' that, if combined smartly, can solve most of the governance puzzles.

A fourth option abstracted from precisely these working ingredients is a 'conscious transition governance'. It applies to all situations where a multi-actor network invests in bringing their society to a new level like in energy use (energy transition), economic shift (e.g. from industrial production to services), social transformation (i.e. from regional focused rural society to European focused networked society), or towards a more innovative society (RIS3).

This governance method combines building blocks of social engineering, modern change management methodologies, human behavioural science and societal digitalization.

Here the governance allows for multiple initiatives, a flexible and open process and multi-actor steering.

It is more the process of governance than the organization of governance that results in a joint moving forward and achieving common strategic goals. There is only a temporary quadruple helix board that distributes knowledge about the content, possible strategic targets, opportunities, actors

and current and possible future stages of the process. This frames the process to a level that can be reached with common understanding by all involved actors. By combining all the energy and effort in a concerted process, this form of governance enables a conscious strategic transition.

To make a clear choice out of the above mentioned governance options for application in large development or transition programs as RIS3, the next chapter will provide insight in the working ingredients and essential building blocks for multi-actor governance.

4.   Ingredients: building blocks for the governance of an operational RIS3

As defined at the beginning of this guide, governance is basically a sophisticated form of a shared steering of a joint process between actors all striving towards a shared future outcome.
The word 'shared' here indicates both times that it is something that arises among actors, although not always consciously chosen or a result of a deliberate social interaction.

Governance focuses energy and efforts of large amounts of actors on one process, while leaving the individual values, views and strives of each one of them as much as possible intact. As a result of that many actors have to be mobilized to put their effort into the plan process and the operational program afterwards when implementing the RIS3. It appears that actors stay in the process only if, like a train, it brings them somewhere they really want to go and they feel ownership of the process.

Thus, governance has to combine a lot of individual, group and network ingredients as well as cooperation methodologies.

Governance will be driven by:
1. Actors playing a relevant group role or a role in the relevant network;
2. Personal and shared consciousness about the reasons for action and causal relations connected to those;
3. The actors' focus on specific areas needing action;
4. Longer term commitment and appreciation of the value of long term network relations by all relevant actors;
5. Willingness of actors to cooperate, share, learn and change;
6. Willingness of actors to advance together and to share methods and mechanisms of governance to make collaborative choices and steps forward;
7. Passion and other personal drives of each actor.

Taking these drives into account, the ingredients for driving successful governance might be grouped into three categories:
- Individual: that what drives a person (human psychology, social science, cultural science);
- Group: that what accounts for a group interaction and group processes;
- Network: that what spans interaction across organizational borders in a multi-actor setting, not necessarily a group.

INGREDIENTS:		INDIVIDUAL	GROUP	NETWORK
CULTURE	• Basic living • Love and empathy • Listening/understanding • Expressing • Playing • Creating • Developing	• X • X • X • X • X • X • X	• Living together • Caring • Referencing • Communication • Playing together • Co-creating • Mutual learning	• Common ground • Caring • Referencing • Communication • Playing together • Co-creating • Network learning
• Personal environment		• X	• X	• X
• Well being		• X	• X	• X
• Awareness		• X	• X	• X
• Consciousness		• X	• X	• X
• Adaptation		• X	• X	• X
• Adoption		• X	• X	• X
• Micro change management		• X	• X	• X
			• De-organization	• X
			• Group model building	• X
			• Social engineering	• X
				• Strategic collusion
				• Gaming

Every individual stakeholder brings his own culture, values, references, perspectives, energy and effort into the multi-actor pool. It seems improbable that all actors strive for exactly the same goal. Even though an actor speaks for his organization it is still his individual thinking and acting that determines his position in the play. And even if they think they do, there is a tendency to act differently based on their own individual preferences and perspectives.

4.1 Perspectives

Initially, we have to find ways to deal with perspectives in a multi-actor setting.
Perceiving things by individuals tends to be influenced by their imagination and perspectives they build up during their life. An example "draw what you see when I say 'chair'", suggests that not two people see the same. One thinking about his favourite reading armchair in his library has a different perspective than another one who just booked a beach holiday in summer.

The difficulty with perspectives in a multiple actor situation is that you can only make them somewhat comparable if you ask every actor to explicitly explain his own perspective and gain insight into perspectives of the other actors. However, there are techniques that may help to do the trick.
It is sometimes possible to skip this perspective issue and account for its consequences in the course of the process.

One of the most powerful and proven methods to join perspectives appears to be Group Model Building[8].

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[8] Vennix, J.A.M., Group Model Building: tackling messy problems. *System Dynamics Review, 15 (4), 379-401. 1999.*

With the following description of this specific method below, all relevant ingredients which can also be used in different methods or even separately are depicted.

Group Model Building is about creating a common understanding of a subject and a 'common language' to handle the subject in a multi-actor network.
The methodology at the same time catches the collective problem solving power and finds those variables that may be influenced to achieve a desired outcome, so called 'steering variables'.
The methodology is explained in the box below.

In a gathering of people everyone is asked to name the steering variables as seen from his own perspective. Next, an explication process follows in which the influence of every steering variable on the rest of them is discussed. Additionally, it is determined which processes are affected by each steering variable, and if their impact is either positive (enhancing) or negative (reducing). Visual mapping of all the variables and their relationships creates a common reference map and in the end a more shared perspective.

With this map and all the steering relationships a system that can be used to build scenarios is designed. A multi-actor gathering is believed to be the most convenient platform for group model building purposes.

Two other useful ingredients linked to the perspectives of actors are *awareness* and *consciousness*.
If an actor is not aware of a certain information vital to his decision making or of his position towards a topic at hand, it is not easy for him to enter successfully the multi-actor 'game'.
There is an assumption that, actors in a multi-actor environment should have the same awareness to enable any form of successful cooperation or collaboration. It forms base of trust in the network.
You often encounter disoriented actors 'running around' network settings unable to connect or to play a role of influence. It is wasting energy that could be used by the network if other actors were willing to share their awareness openly.
A common accessible social network or website can help to create awareness among all relevant stakeholders, helping them to include or exclude themselves from a shared level of awareness.

Consciousness has, however, a rather different function than that of awareness.
Despite actors' ability of being aware of something, a deliberate action upon such an awareness does not seem to follow automatically.
People need to acquire a capacity of conscious acting based on a clear understanding of available information and possible outcomes. They are expected to act strategically while having a fair overall perspective, good understanding of the possible processes and outcomes, and a vision and experience on how to influence the current situation towards their goal.
If a region possesses all the business and knowledge necessary for forming an innovation cluster that can open new market opportunities, all the relevant actors are awaited to consciously act in a direction that leads to creating the required innovations which are subsequently valorised in the new market.

To achieve consciousness of every relevant actor, putting in place a single governing actor with a clear and generally accepted position in the network that teaches all actors the right understanding, or a governance that acts as a collaborative learning facility might be suggested.
Collaborative learning appears to be the most powerful way to create general consciousness.

Vennix, J.A.M., *Group Model-Building: facilitating team learning using System Dynamics*, 1996, Chichester: John Wiley and Sons.

In a multi-actor network, collaborative learning results in a joint capacity to act, making use of all the available individual capacities. Therefore, it is more efficient to collaborate as the accumulation of the individual capacities benefits all. The previously introduced group model building methodology may function as a quick and practical form of collaborative learning.

Raising and achieving consciousness is believed to be valuable especially in integral regional development.
The need to achieve a fair level of collective responsibility and to encourage a responsible action of every actor is essential for collective investment leading to more than just profit of regional economy. It is the collaborative development of consciousness that leads to inclusive development, distributing gains to all citizens and including all major societal functions, e.g. healthcare, talent development and regional ecology.
In regional development it is crucial to bring consciousness of all effects of choices[9] to the multi-actor network. With help of governments all over the world sustainability institutes invest their efforts in raising consciousness of the public, but more important of private businesses. To conclude, sustainable innovation and production function as an investment in broad societal development while keeping their profitability from the economic point of view.

4.2 Individual ingredients

The base of every social structure and process is an individual and his characteristics. So to start with, what forms and drives an individual is the most important determinant of quality of outcomes of plans and processes.
Therefore, the set of individual ingredients constitutes the base of all governance.

Individuals are formed by their genetic offspring, their upbringing, the cultural environment they live in, the social structures they grow up in, their talent development, the ecosystem they live in, even by the food they eat, the air they breathe and the water they drink.
It is not easy to account for all of these in creation of governance. But there are some simplifications that may facilitate the understanding. Maslow with his pyramid of personal drives[10] leads the way in the recently developed descriptions of individual culture and wellbeing.

Human development psychology and studies of human behaviour help to derive seven drives of human biology. Together they form the concept of the individual culture.

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[9] K. van Egmond, Een vorm van beschaving (A form of civilisation), Christofoor press, Zeist, 3e print, 2013
[10] Maslow, A.H. (1943). A theory of human motivation. *Psychological Review, 50*(4), 370–96.

Your individual biology: the seven factors that drive your life

drs. Willem R. Reek MCM ©
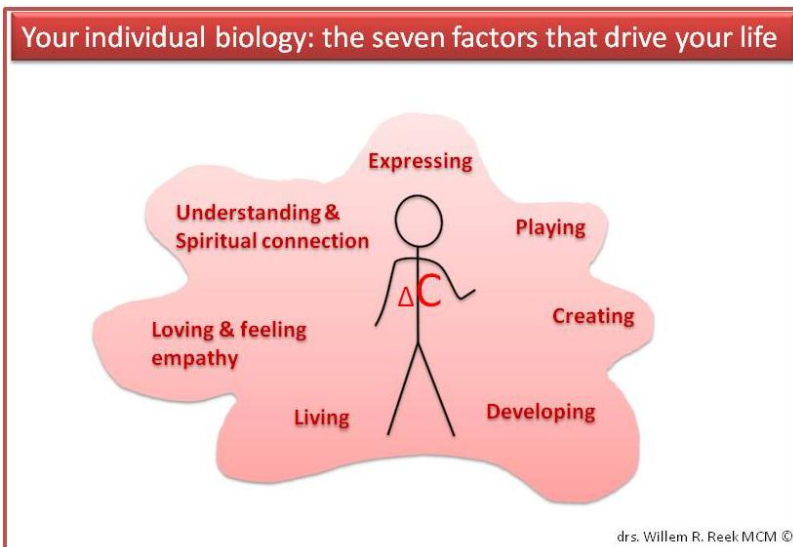
"Living" as the first drive, cares for the provision of basics for sustaining life, like food, water and shelter. In the clockwise direction the other drives that connect the human explorative and social brain through his senses with the world around and allow for his development may be found. If all the drives are present during each life period, as a result, a fully functioning being is developed.
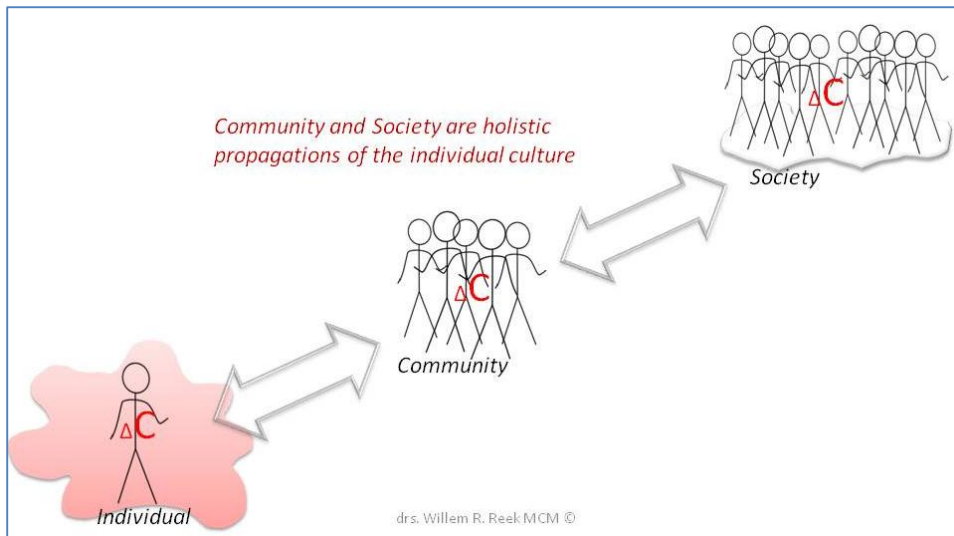
The figure "delta C" stands for the ever developing individual culture[11] as a sum of all the drives and at the same time an outcome of all the drives functioning together.

There is neither a social interaction nor a cooperation that does not function along these seven drives. The only existing functioning drive outside these seven is the human environment or ecosystem.

We can take these seven (or eight including the ecosystem) ingredients of individual culture as the basic ingredients for all social interaction and structures at any level of aggregation, and thus for governance of such complex multi-actor networks as is the RIS3 playing field.

A group, a community or a society can be seen as a holographic continuation of the same ingredients, the seven drives, but then interacting with each other. What happens at individual level is reflected in what happens at the community level and what happens at the community level is echoed in the individual culture.

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[11] Here 'Culture' has a much wider meaning than the explicit culture as in arts, clothing and food, etc., which we normally use as the connotation of culture.

Community and Society are holistic propagations of the individual culture

Society

Community

Individual

drs. Willem R. Reek MCM ©

Tolstoj: "I am part of everything, as everything is in me"

If plans, programs, processes and their governance take these seven individual ingredients into account, they can reach out to every community and to every individual in society and get directly to their heart.

For instance: a RIS3 plan process using an inclusive language, that lets actors express their ideas, that creates opportunities to co-create content but also the process itself in an inspiring and playful environment, and that provides learning and development options differentiated for all actors, brings all necessary stakeholders to a successful joint entrepreneurial process of discovery[12].

'*Well-being*' is a concept that encompasses all that gives a perception of value to life (human and natural). It is also based on the concept of individual culture and its living environment, but it goes even further.
It describes a relative, perceived or presumed value of the achieved levels of the seven drives of the individual culture in comparison with available opportunities and achieved levels of others in the environment of the individual. Hence, well-being is partly a group ingredient as well.

To illustrate: having a job and a certain amount of money to spend does not mean that your well-being is at a good level. It is also needed that you can afford necessities for life and that most of them are available in the neighbourhood, that is in your daily living environment. Furthermore, you should have a feeling that your living standard and opportunities to develop yourself are at least comparable with the ones in your social environment. It does not appear that people always choose to possess more or to live up to a certain social class. It might well be that someone perceives more well-being in refraining from possessions and living a sober life. Well-being is all about individual perception of value of those drives which are of the greatest significance to an individual .

The effect of trying to influence well-being of individuals, whether positive or negative, will result in inclusion and engagement of individuals and give a fair predictability of individual behaviour in the community.
For successful use of this ingredient it is needed to reach a good understanding of the state of well-being of all the involved individuals. Biometrical mapping, data mining and screening are

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[12] See RIS3 process of the Northern Netherlands region 2012-2013.

sophisticated means to gather the necessary information, although conventional questionnaires and monitoring group behaviour can already provide with a rather clear image.

In governance, the focus on well-being is extremely helpful because it can bind actors to take up responsibility and to lend their efforts to the process.[13]

Adaptation and *adoption* are ingredients that refer to how people approach changes, for example changes in their environment and positions, new developments and innovations.

Adaptation is the way people change themselves to catch up on changes.

People got quickly used to be connected all the time since smart phones were available.

Adoption is the way people accept changes as part of their natural day to day life.

If an organization changes its goals, its employees will adopt them as their operational goals in time. They internalize the new demands.

This topic is further discussed in chapter 4.4 on multi-actor networks .

The final crucial ingredient is *micro-change management*[14]. It is a change management method that breaks down the change process into small tangible changes in daily life and work, so called 'change particles'. This breakdown is, however, done in a simple open process by the actors themselves who discover how to perceive their activities and environment differently and acquire adequate and rewarding behaviour to cope with that.

Micro-change management has proven to be useful in organizational change but also in remodelling networks. In addition, it supports bottom up governance methods. This ingredient is valuable for governance in highly undetermined situations, in which step by step discovery of the process and its governance is needed by all actors.

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[13] For the formula assessing the level of well-being in society for strategies, policies, businesses, operational programs and governance in a useful way, please contact the writer.

[14] Introduced by drs. Willem Reek, Vereniging voor Overheids Management, The Hague, Oktober 2002.

4.3 Group ingredients

The ingredients focused on the functioning of groups in governance can be abstracted from the individual ingredients that are in place.

Besides, 'de-organization' and 'social engineering' can be powerful extras. These are discussed in the guide later.

At the group level, either team, board or community, the same seven ingredients of individual culture now translated to their social interaction versions can be observed (see figure). These can be used to create *group interaction* and a group-shared process.
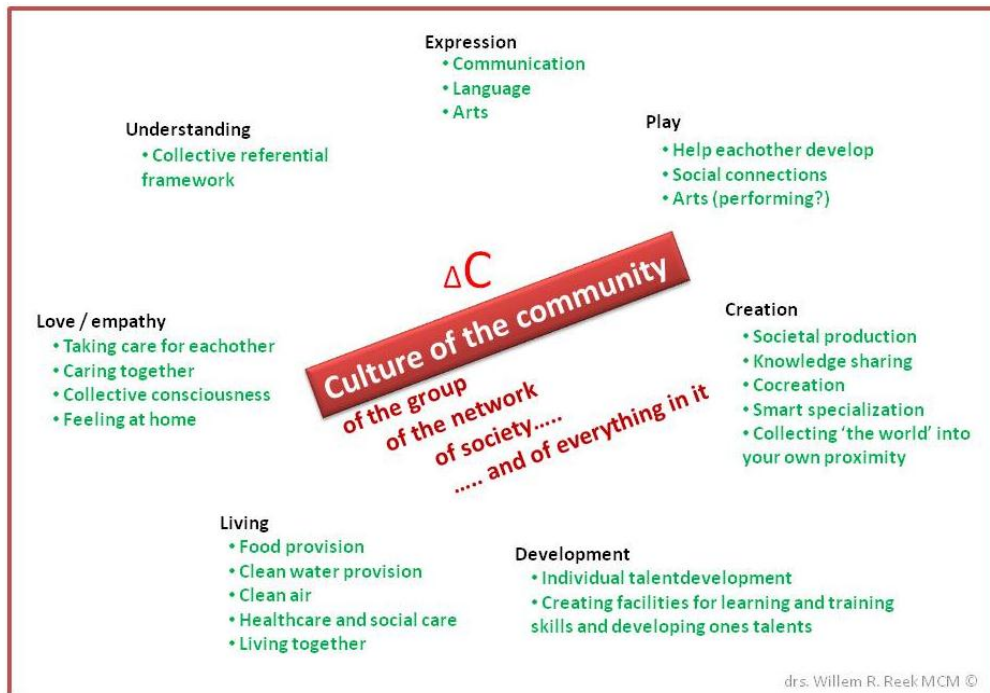
Following group ingredients are found here: social connections, knowledge sharing, language, caring and also smart specialization. Smart specialization, for instance, is a group process that calls for a joint effort, a shared responsibility for the outcome and an individual change to comply with the chosen focus. Moreover, it is also a binding process creating a group energy. On top of that, it promises to be rewarding in creating new opportunities for development and a stable well-being for all in the end.

However, groups tend to get focused and institutionalized inwards which blocks an open development, excludes valuable influences from outside and, as a result, it reduces possibilities of co-creation. Therefore, the same group ingredients are suggested to be used for opening up a group and de-structuring it, just to prevent it from growing a fence against the 'outside world'.

In the RIS3 process, it is essential to connect people who work in organizations by linking their organizations and joining their organizational efforts with the process. Many times organizations and their policies must open up to allow for a really open and shared entrepreneurial process towards a new regional innovation or transition strategy.

Not surprisingly, the participating organizations are largely affected by this process, which, however, can be also largely beneficial for them. This opening process enables them to adjust to the ever changing environment and circumstances and make use of new opportunities.

In many cases, the RIS3 process initiated an entrepreneurial process of discovery that resulted in a discovery of new, mostly cross-sectoral, markets with new business opportunities for many participants.

Between the rather closed development pillars of Healthy Aging and Agri-Food in the Northern Netherlands a totally unexploited Healthy Food market was found, which has quickly been inhabited by lot of new and existing SMEs connected to universities.

De-organization is a key ingredient believed to change the perspective of actors involved in a new extra- or intra-organizational setting. It is also a tricky method as it can easily build up an opposition in forces that try to stabilize the organization. Such forces are often more influential, thus disconnecting that organization from a valuable contributing role.

Finding individuals within an organization that have a sufficient amount of freedom to devote part of their attention to something outside and whose influence on organizational movements is relatively large contributes to opening up an organization.

The seven drives of individual culture will help to 'pull the employees out of the inner sphere' and make them account for their new occupation but at the same time allow them to stay connected with their organization. That can be achieved by offering training or workshops or by inviting people to speak in conferences on subjects that show connection between their home organization and the change process (i.e. RIS3). The collaboration based funding of the European Commission often creates new networks and opens up fixed structures in public government, universities and private businesses.

In the operational period, the participating organizations may collaboratively share work on tuning processes with other shareholders .

When talking about de-organization people often react as if a prohibited area is entered.

De-organization might be recognized a natural transition course of history, from hierarchical industrial over organization towards a more flat and equal networked society. The RIS3 process may speed up this transition by applying de-organization actively in order to build a governance that can act successfully in a multi-actor networked society.

Social engineering connects right people in a right setting in order to achieve an interactive process that works for achieving goals.

It is questioned if there is an actor or acting body in governance that has a power or a mandate to utilize this ingredient. A quick solution used in some RIS3 processes is installing a quadruple helix steering board or a strategic board with a broad supporting base amongst all major societal stakeholders. This board can temporarily act as a social engineering body.

Social engineering is a valuable ingredient as it is able to bring a right energy to the process quickly and show results at the beginning. Consequently, it encourages more and more actors to participate and creates the basis of the multi-actor governance, that is needed later on.

Forms of social engineering are think tanks, advisory boards, 'invitation only' work sessions and meetings, as well as trade missions to other regions.

In addition, social engineering supports also social inclusion by including into the process people that would normally be excluded or just not noticed.

4.4 Network ingredients

The difference between networks and groups is that in network acting entities, either individual persons or groups connect to some current or future goal, each with his own agenda and capacities of investment. Unlike groups or any other collection of people, a network is mostly not a group nor any other collection of people held together by a hierarchical structure or social adhesive.

In the sense of societal development and transition, a network is most ideally a connection of all essential actors and their efforts that co-create each of the transition steps while pursuing more or less their own goals.

RIS3 and its supporting S3 Platform are initiated by the European Commission as a breeding ground for Europe-wide networks of developing regions, regional stakeholders, private actors and knowledge institutes. All these networks use collaborative innovation programs to speed up societal development.
The concept of 'transition networks' is gaining ground over the traditional government controlled development.

Network analysis resulting in 'network mapping' is an elementary ingredient for governance in a network. Already plotting of stakeholders, interested people, groups or organizations in a certain development or transition represents a powerful instrument which contributes to understanding of their positions and targets.
This type of analysis requires extensive work, but it is often an interesting temporary research assignment for students during their internship. It brings them in contact with possible future employers and shows them an example of the way in which society functions.

In a multi-actor network setting, like   RIS3, the success of the strategy implementation is determined highly by the speed, level of adoption of common goals and adaptation to the strategic development process.
RIS3 governance should support flexibility of actors to adapt to the development process and develop common strategic and operational goals in such a way that adoption takes already place in the definition process.

The process of connecting actors with different perspectives and goals in order to achieve one temporary shared target is called *strategic collusion*[15].
Strategic collusion can contribute to find a range of targets to be adopted by a network. It scans capacities of each actor to adopt a target depending on coincidence with his original targets or expectations of current or future gains. Plotting a possible target range of every actor and also his or her restrictions demonstrates a target range that all (or most of the) actors can adopt.

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[15] Snellen, I., Approaches to Strategy Formulation: a contribution to the Policy Sciences, Samsom, Alphen aan den Rijn 1982
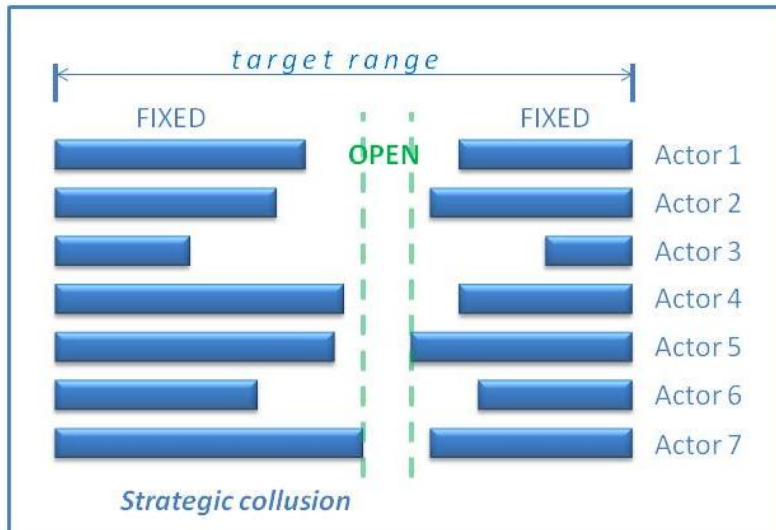
In a network, this is a base for governance agreements as it also predicts a relationship of every actor and the final target. If the actor is already stretched to the edge of the interest range, he is less likely to devote a lot of effort.

If a chosen target gets into the centre of actor's attention it is probable that he or she invests more energy in its achieving from a higher expectation of a future profit.

An actor can also decide to devote an extra effort to keep another, less interested, actor aboard for reasons of gaining support or because the other actor may be more valuable in a different parallel network on another issue. A wish for a future collaboration can also make actors to raise their activity.

Strategic collusion is an open process giving insight to positions of all actors involved, helping them to decide which connection to choose and where to invest effort, time and money.

What is more, strategic collusion can show necessity to loose an actor in the network because he blocks the process. It can also show who could be a valuable addition to the network either as an investor or a support member, or a binding actor, keeping others in the process.

Strategic collusion can give input for social engineering as described earlier.

As described for groups, *social engineering* is also a valuable ingredient in networks.

Another useful ingredient in governance of networks is *gaming*.

All seven individual drives described in the chapter about individual ingredients can be applied also to the network. Especially the ability to play and to co-create are particularly powerful in network situations, mainly because every individual plays his own role while interacting with roles of the others. The individuals confront, challenge, connect, push, stress and empower each other. As a result a a rich pallet of interactions within and influences on governance of the network is created. If applied well, gaming theory and gaming methods can help to bring maximum quality results from the available assets while keeping attention and commitment of all actors.

Gaming may follow different plots and use a wide range of methods.

One of these is scenario building challenging a multi-actor network to explore possible future outcomes, such as a new economical base for a region.

Another example are virtual building applications in which every actor can participate in building and visionalization of a city, a new product, a connecting infrastructure or functional architecture of a community building.

One recent powerful gaming method for creating a network attached to a specific target is crowd sourcing. It consists from publishing an expected outcome after raising enough funding, other

support or content is harvested from the crowd. What's more, a future share may be promised to those actors make commitment as first or with a given minimum level of effort.

Digital social network applications and community software can provide tools to support most of the described gaming methods.

5. Cooking together: cooperation and setting up RIS3 governance

As all building blocks of successful governance are put on the table, the setup for governance may be explored. As already stated , it should be a joint multiactor process leading to creation of a shared governance that spans all levels, from strategic to operational investments. Willingness to cooperate is crucial.

5.1   Cooperation

Cooperation of all essential actors is a vital condition to achieve successful societal transition by implementing RIS3.

It tarts already in the definition phase of a regional strategy, but it must continue through the phase of the operational programming and investment contracting and has to be sustained throughout many years of the operational phase.

Here governance has a severe task to transmit the positive cooperative energy at the start of the RIS3 process into a much more 'real deal' situation of spending effort and money to achieve the promised tangible results.

People have to work together over longer periods, possibly with continuous need to balance their cooperation in shared RIS3 projects with their 'home bases', that is organisations paying their salary.

If cooperation is set up bottom up, starting with planned or actual investments in developments like market innovations or valorisation of new products and services, governance has a task to open up an individual strife to allow for a cooperative process with more actors involved.

As cooperation is set up at a strategic level or from a common strategic plan, governance focuses on achieving concrete operational targets and fostering operational cooperation to get things really done.

In an operational RIS3 process, a wide range of projects and processes are both bottom up and top down forms of cooperation.

This leaves the difficult task to arrange a governance that can shift all the time from top down to bottom up and back and focus on specific issues.

Governance must continuously maintain strategic oversight and provide strategic cooperation with sense.

An installed *governance board* has to be able to interconnect across all levels, from strategic to operational. It might be perceived as a 'connecting board' rather than a 'steering board'.

In the RIS3 governance of the region Valencia, the governance board consists of leading representatives of the quadruple helix sectors of society, an additional advisory team and several working teams chaired by the representatives. These teams are formed by actors responsible for business operations and change projects in society.

Cooperation at all levels can be this way governed in a balanced and equal way in amulti-actor environment.
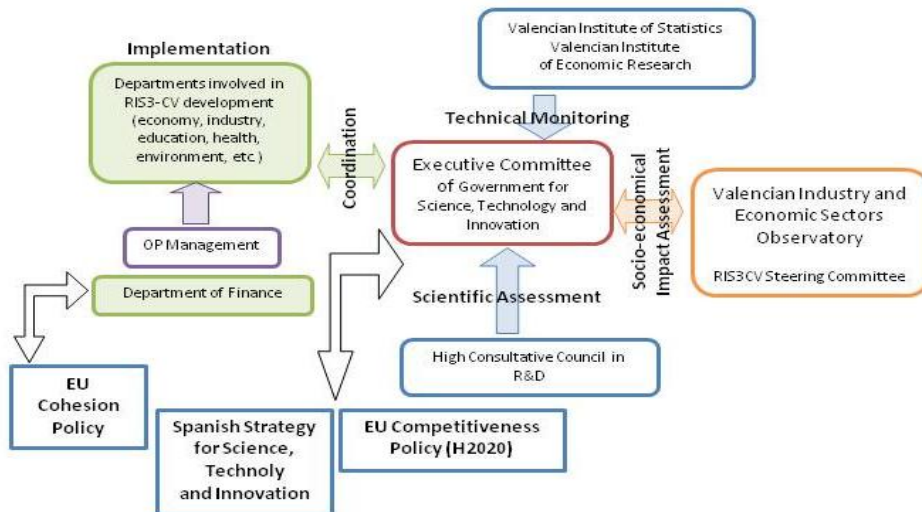
Illus. Valenciana Governance Model

Governments tend to initiate regional development based on their natural role and public responsibility. Organizing cooperation on carrying out these plans is, however, not a privilege of public government. Notwithstanding, government regularly takes the initiative, often without any entrepreneurial spirit needed for successful implementation.
It is not in their behavioural patterns to leave initiative to others, e.g. private sector or valorisation institutes, to take care of generating the necessary cooperation.

A common governmental argument is that implementing a regional innovation and/or development strategy utilizes large amounts of public funds and needs to be controlled. Another argument states that a strategy implementation has to be strictly arranged within the boundaries of the legislation on government support. That will, however, paradoxically in most of the cases lead to inefficient spending of the funds.
Some universities and private businesses complement with their behaviour the approach of governments by regarding the controlled developments 'money taps' and nottaking share in responsible expenditure and in creating the planned societal benefits. Of course there are exceptions.

In the governance of cooperative regional development the role of governments shifts from decision maker and controller to enabler and creator of opportunities. Governments can bring actors together, support their search for common goals and cooperative investment. Sometimes by taking extra risks that arise for the public benefit.
Governments can also open up new markets, pursue research on public needs and wants and support innovations that lead to products and services in the area of a new market.

Nowadays there is a lot of interest in exploring the cross-sectoral space. It is believed that society has cross-sectoral needs, for instance solving grand challenges of lowering healthcare costs by increasing a healthier eating behaviour of citizens. As a result, the healthcare and agro food sectors are urged to cooperate and new opportunities for new and existing entrepreneurs are created.
The governmental role has to shift to opening opportunities, removing barriers and 'letting' the entrepreneurship and the cooperation issues to society.

Open societal development can be seen in the 'innovative cities' development and in the living lab centres across Europe. Living labs are public-private research centres focused on interactive development and innovation directly with the public or customers. In many cases, it shows a process in which societal developments take place in real life, as a shared definition of quadruple helix actors. However, living labs hardly manage to incorporate a wider public. In general, they work with a a-select or select group that serves as a good reference for the wider public[16].

The Northern Netherlands region has chosen to incorporate large parts of its regional society in a 'living lab region' setting. For example, the region monitors, researches and develops healthy aging services and measures in cooperation with a vast group of over 100.000 citizens across 20 years of their life, in close interaction with private, public and knowledge organizations. Also Further, development of clean water facilities is pursued in real life settings across many living areas in the region.
Valorisation of sustainable energy solutions is carried out in cooperation between different 'sustainable islands' across the world, where a large number of regional population is involved in developments that continue bringing benefit now and in the future.

In the United States of America, 'Code for America', serves as 'the' cooperation engine to conquer their grand societal challenges[17].
Code for America is a platform with a supporting organization that promotes grand societal challenges and invites individuals, entrepreneurs, businesses and research community to invest their effort in solving the challenges. The platform benefits those who want to invest in societal development. It connects actors and provides collaborative learning facilities, exclusive conferences and cooperation between actors on solving challenges together with government support.
It has become a large movement in the US that creates a multi-actor governance.
Now it is still a government controlled creative environment. However, once cooperation in society works, government can take different positions and fill all gaps. Governments should be careful not to fill gaps that arise from the mere certainty that government will clean up everything other societal actors leave behind.

Introducing a 'Code for Europe' as a common European platform for the next operational phase of RIS3 in Europe could be a next step in the life of the S3 Platform of the European Commission.

5.2   Setting up governance
In a complex multi-actor environment around an operational RIS3, the setting will change over time. While some actors stop their activity, new actors arrive at the scene. In the operational RIS3 phase differences across an operational program might be observed. Some projects may finish while others are in full operation or just starting up. Therefore, governance should differentiate.

It is to be expected that such a large development program like RIS3, that spans over many fields and issues even after making deliberate smart specialisation choices, needs multiple governance processes at the operational level and an overall governance at the strategic level. However, despite such a differentiation these levels of governance should intertwine. There might be a form of a representative governance at the strategic level as discussed in chapter 3. The governance at operational level will probably be arranged by all investing shareholders. They either organize this themselves or leave it up to actors that facilitate, like public government. They can also ask actors

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[16] Exemplary living labs, focused on societal developments, can be found in Aalto university Helsinki, University of Barcelona and the Polytechnic university of Valencia.
[17] See, http://www.codeforamerica.org/about/

with a specific governance capacity, like universities and bigger business organisations, to take up the governance roles.
The form should in any case be a conscious choice of all connected actors or their representatives.

A good way of preparing governance is to determine the value network and the process to be governed. Organizing cooperation and shared investment starting from content is far easier than starting from a focus on management and steering.
If a network was formed and people involved in it have formed groups around a joint target, a program or a process, the next step is to determine governance needs of the program or the process collectively.

"What do we need to keep connected on our joint focus?"
There are no other more frequent questions than this. Every additional question like "how do we account for our project?" is obsolete. In the governance of shared investment, all the shareholders are involved in it and there is no one else to account for than themselves and their own expenses. Such an approach may, if we want, eliminate a lot of administrative burden and reduce overhead costs of the program to a minimum, leaving the money for creation of a real added value.

Here we meet a fundamental change in the position of 'public funding' and of public government as the guardian of it.
Traditionally, the process of including public funding started either with announcing a public call or writing a good proposal. The proposal was filed with a responsible government, who was judging it. If approved, the public administration applied its own rules and restrictions to its implementation.
In a quadruple helix governance process, bids of actors are on the table at the same time and all adjacent restrictions are taken into the equation at the definition phase. This leaves no room for extra control positions of any actor, not even public governments.

Therefore, the quadruple helix governance might be considered the best guarantee for involvement of large private funding in regional development processes. Private sector would not invest while leaving the steering to public administration which in most cases misses the entrepreneurial capacities and experience.
In practice, there might be hybrid situations since public government and its policies are not yet fully adapted to this new role and position. The more governments dare to acquire a new role and invest public funds while leaving the control to the shared governance, the more effective the development projects and processes are in a real life society.

Installing a temporary taskforce is one of the proven methods to set up governance for an operational RIS3. Such a taskforce consists of a representation of the quadruple helix partners involved in the strategy process[18]. A purpose of the taskforce is to organize an operational program and its governance as a cooperation between all involved actors. The taskforce installs governance merely by abstracting governance needs from the operational program or process in working sessions with actors involved in the program like investors and project leaders.

One of the issues in the current phase of creating RIS3 across Europe is how to get the operational programs filled. This task is traditionally performed by public government. Traditionally project or investment initiatives are sent for an opinion to the appropriate government which, after a thorough assessment, decides to include the proposal into the program or exclude it.
Following the line of this guide, it is, however, up to all the actors who invest in the operational program and its development projects or processes to determine what they want to include in the regional program.

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[18] Taskforce RIS3, Northern Netherlands Alliance, June 2013

Hence, the task of the taskforce is to promote the regional program and show advantages of connecting initiatives and investments in them.
The setting of "Code for America" might be valuable to such a taskforce to fulfil the task.

The operational program period actually starts with signing the 'agreed governance code'. At that moment the taskforce should dissolve itself and the installed governance becomes effective. The taskforce may also change into an 'advisory board' or a 'strategic board', still supporting the RIS3 implementation.

6.   After party: feedback loops in governance, collaborative monitoring and evaluation

Monitoring and evaluation are subjects which were already addressed at conferences[19] and in papers by the S3 Platform.
When it comes to governance, the question is how to fit monitoring and evaluation in the joint steering process of governance in such a way that it can add to shared choices from a shared understanding and perspective.

One of the tasks of the RIS3 strategy process that precedes the operational process is to determine the regional development targets. It should be an interactive process detailing targets up to the level that directly invites to actions like investments or innovations. In such a process, also the indicators of successful implementation and for later steering interventions must be set by the relevant actors. This process continues in more detail and practicality in the programming and implementation phase of the RIS3. Monitoring should cover whatever each investor needs to review and revise his investment in size, speed, timing and success during the operations he is involved in. Process, as well as outcome indicators are necessary to demonstrate tangible results.

The 'monitoring for reasons of accountability' is on purpose excluded from the perspective of this guide. As discussed before, it is much easier and more fruitful to establish a cooperation on content than on accounting reasons that lie outside the direct influence of the actors. Although actors may have to account for their investments, they can always do it by showing outcomes as their success as well as their position and influence in the process, the way they perceive it.
The main goal should be to achieve a maximum effect of the investments in societal and economical outcome and not to drown in a process control and administration.

The way the actors evaluate information derived from monitoring should be agreed in a governance agreement.
Can an installed governance act on the monitoring outcome directly or through a sort of lightweight evaluation? Is a regular extensive collective evaluation and debate obligatory before governance can adjust the process?

It is about a mandate which the installed governance process has to act in operational situations. It is about trust among actors and a their pre-balanced relationship. Monitoring and evaluation which become a main target will likely disturb a successful development if not kill it.Consequently, monitoring and evaluation should be an agreement focused on outcomes and derived from a shared process determining actions and governance needs.

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[19] S3 Platform work conference on Monitoring and Evaluation of RIS3, North Netherlands, January 2013.

7.   Master cooks: Who can help you?

Number of advisors, organisations and institutions proclaiming to know how to organize governance and offering such a service is increasing.
Governance with its development is a change process in itself. It is better to hit your head by setting small steps on your own than to avoid it by hiring others and miss out potential collaborative learning opportunities.
Furthermore, it may be more resource consuming to find an appropriate agency helping cooperative actors with instalment of their governance than going through the process itself.

Mutual learning is a powerful tool in creating governance. There are plenty of regions   which go through the same process. Sometimes they start with a head start and in a different cultural and multi-actor setting. However, they can always learn from just looking at each other while playing their own game.

Someregions are so similar or have to solve common issues that they choose to combine their multi-actor networks and create a macro level governance together.
This is perceived positive by most of the actors, not only because a larger development area with possibly many more potential knowledge sharers, investors and customers is created.
Development of macro-regions, such as the Baltic Sea region and the Danuba region and possibly the Mediteranian Sea region or the North Sea region should be applauded from this perspective.

The S3 platform connects regions which can reflect on each other and thus enhances opportunities for mutual learning.
The regions of Helsinki, Skane, Valencia, Catalunya, The Central Netherlands and The North Netherlands offer an open access to their development process and a process of installing and operating RIS3 governance. That does not mean that they are the best. Although having some experience from the past which enables them to create a well functioning governance in time, they are open for a mutual learning and in search for potential future cooperation partners as well. Find fellow regions that develop their governance in a way that enables pan-European connection is one of their highest interest.

8.   The cooking club: If you are successful, share your experience in the S3 Platform

The S3 Platform was installed by the European Commission as a collaborative learning point for European regions and institutions to help them create their smart specialisation plans and their RIS3. It is enabling all European regions to go through this valuable process and helping each other forward. The S3 Platform serves as a meeting place for a future European interregional cooperation.

The majority of European regions will have their RIS3 by the beginning of 2014 and others probably soon after. Subsequently, the role of an important node in the European networks like the S3 Platform change.
Regions of Europe need a knowledge base and a platform to deal with the even more complex operational RIS3 phase. Now there is a demand for learning from each other and for finding partners for cross European cooperation.

It would be a good investment of the European Commission to ask the JRC-IPTS and its S3 Platform to take up this new role as a governance expertise centre and a RIS3 operational platform.

The S3 Platform could elaborate its current instruments and methodology and tune them to the new phase.

After all, European cohesion is best met with cohesive behaviour and sustainable collaborative acting.