

# JRC Scenario Exploration System



- *The Food Safety and Nutrition edition* -

## Exploration Master Instructions



#foresight4EU  
#policylab4EU

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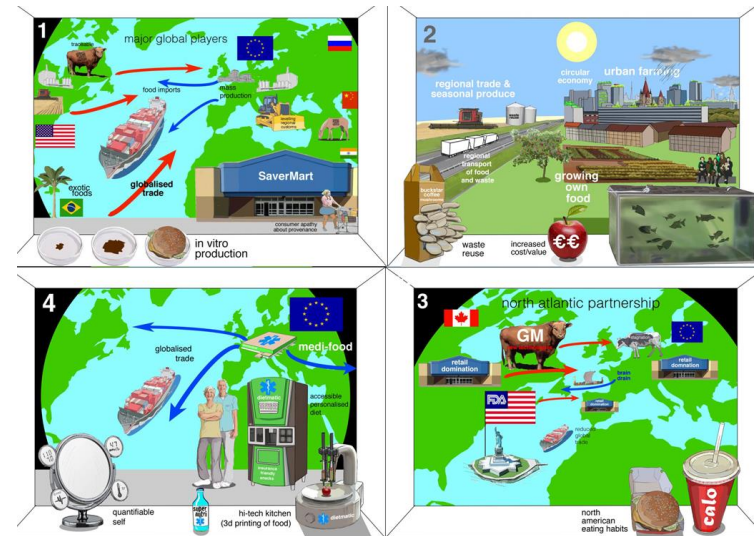
# Background

The foresight study 'Delivering on EU food safety and nutrition in 2050 - future challenges and policy preparedness' aims to aid policy makers in their assessment of the resilience of the current food policy and regulatory framework with a time horizon to 2050, contributing to ensuring that EU citizens continue to enjoy high standards of safe, nutritious and affordable food.

The study employed the methodology of scenario development. The scenarios were constructed based on different developments of specific drivers that can significantly impact and bring change to the food system; these are global trade, EU economic growth, agro-food chain structure, technology uptake, social cohesion, food values, climate change, depletion of natural resources and world population growth.

For each scenario, a number of food safety and nutrition challenges were identified and prioritised based on their importance and likelihood to occur.

On this basis, scenario-specific policy options were developed as suggestions to policy-makers on how to address these challenges to ensure the resilience of the future EU food safety and nutrition regulatory framework. Research needs were also identified to complement the proposed policy options, as well as a set of food-chain related indicators that could inform in advance if the EU is headed towards one of the study's scenarios.



# Purpose and principle of the SES

The purpose of the Scenario Exploration System (SES) is to have participants experience and act through plausible alternative futures, by thinking and conversing systemically outside of their usual frame of reference.

The SES uses the four scenarios from the JRC foresight study (see p.1) as a framework for the alternative future worlds that participants explore.

Four characters (two Policy Makers, a Business and a Civil Society Organization) take actions to reach their visions over three rounds in a 20 year time horizon. A fifth participant, the Public Voice, analyses the actions taken at every round and gives feedback and value to the actions taken by the characters.

Success takes several forms: the character that has wielded most influence throughout the three rounds; who has reached their own long-term objective; collectively by how close their actions has brought them to a sustainable future.

The SES can be used either in a general scenario exploration mode or in a specific topic exploration mode.

In general scenario exploration mode participants will discover systemic elements from the scenarios, challenging them on their journey to achieve their long-term objectives. Two contrasting scenarios are explored in order to get an understanding of the importance of external drivers on how to reach one's objectives.

In the specific topic exploration mode, exploration functions in the same way, but the scenario specifics, drivers, actions and visions will be set and selected in the frame of, and with context of, the selected topic.

A debriefing and discussion session is held at the end of both exploration modes. Each exploration ends up telling a unique story that can be recorded for further analysis.

# Content: Megatrends

Before starting the game, the participants are made aware of five megatrends that will affect all scenarios over the next 20 years. The corresponding cards are placed on the board face down during the explanations and will be used in the exploration as possible concerns of the Public Voice.

## By 2035...

**...world population is expected to reach 8.6 billion, with a stable, ageing population in Europe and sharp increases in Africa and parts of Asia. As the economies of emerging countries keeps improving, the global consuming class booms, increasing by 4 billion!**

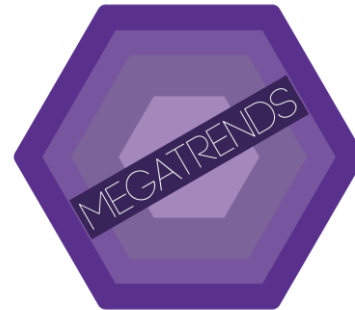
**...all these extra people lead to a massive increase in urbanisation.**

**...the first generation of "digital natives" is now in charge.**

**...a steady rate of climate change has brought warming to 2°C, with its accompanying sea level rise, profound damage to agriculture and infrastructures, etc.**

**...unabated fast technological development has facilitated the use of social media, improved mobile technologies, made sensors pervasive, etc. The internet of things and a hyper-connected world are now a reality...**

These megatrends affect the whole scenario exploration and must be taken into account as far as realistically possible.



# Content: Variable drivers

In addition to the five megatrends, 15 drivers were identified by the JRC foresight study as potentially relevant but with a higher level of uncertainty. They influence gameplay in a random fashion, by being possible concerns of the Public Voice.

They are:

Increasing scale of man-made disasters

Loss of biodiversity

Converging technologies

New governance system

Increasing pollution

New international trade rules

New investment landscape

Niche markets dominate

Competition for land

New leadership

New materials

New technology

Non-EU policies

Social innovation

Volatile markets

These drivers are presented in a stack of cards face down, near the megatrends. **At the start of each round, a new variable is revealed** and the previous card is placed at the bottom of the pile. This variable driver will affect the corresponding round as far as realistic.



# Content: Real life cards

**8 *Real life* cards were identified to balance the role of the public voice.** They describe real life events that can be used by the scenario explorers.

They are:

Accounting scandal

Collaborate for free

Large uncertainty period

Favourable unforeseen event

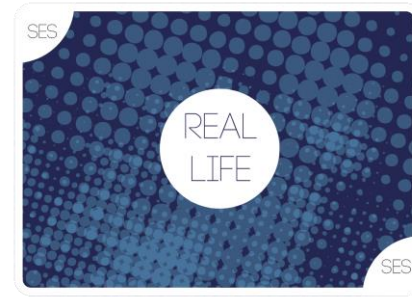
Block another real life card

Fast communication

Silence public voice

Favourable new trend

Scenario Explorers (not the public voice) pick 2 *real life* cards per round. **Each round they can play a maximum of one *real life* card.** After having used a card, they pick a new one from the pile so as to have the choice between two cards at any time.



# Content: Actions, Collaborations and RTs

Each character (not the Public Voice) receives a set of action cards adapted to their role. Participants can invent new actions if necessary using generic 'Action' cards. They record the specific action.

They receive *Resource Tokens (RTs)* to give strength to their actions. The number of RTs per role for all three rounds and the minimum RT "cost" of an action depend on the scenario being played. Explorers use RTs as they please.

In the 1<sup>st</sup> round, the explorers act individually. In the 2<sup>nd</sup> and 3<sup>rd</sup> rounds they can, in addition to acting individually, also collaborate upon request with one, two, or three other explorers. In that case, each contributes as many RTs as desired (but adhering to minimum cost as defined according to each scenario – see table at right).

Explorers put collaboration RTs on the action card of those they want to collaborate with. A key advantage of collaborating is that each partner receives the full score from the card where there is collaboration. Collaboration is cheapest in the collaborative scenarios.

	SCENARIO 1	SCENARIO 2	SCENARIO 3	SCENARIO 4
Business	6	8	12	10
Policy maker 1	8	12	10	6
Policy maker 2	8	12	10	6
CSO	12	10	6	8

Number of RTs per player for each scenario

Minimum RT cost	SCENARIO 1	SCENARIO 2	SCENARIO 3	SCENARIO 4
Individual action	1	1	1	1
Collaboration	1	1	2	2

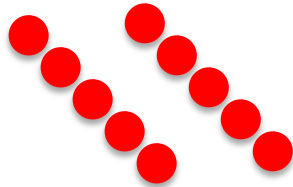
Minimum RT cost per individual or collaborative action for each scenario

# Content: Public Voice and F.I.T.s

As the Public Voice is an observer, its influence will not be expressed through actions but through its analysis of the situation, its narrative and the two headlines he/she will write and share with everyone at the end of each round of the game.

But as public perception and the resulting public behaviour are so important, the Public Voice gives more or less weight to each action through red *Future Impact Tokens (FITs)*.

**The Public Voice receives 10 FITs for each round** and is free to place them as it pleases. Any unused FITs after a given round can be used by the Public Voice in subsequent rounds.



The score of each explorer at the end of each round is obtained by multiplying the strength with which each has played his/her actions (i.e. the number of *Resource Tokens*) by the number of *Future Impact Tokens* attributed to the action by the Public Voice.

In the case of collaborations, each collaborating partner receives the total obtained by the card, i.e. total of RTs played by all players multiplied by the FITs attributed by the Public Voice.

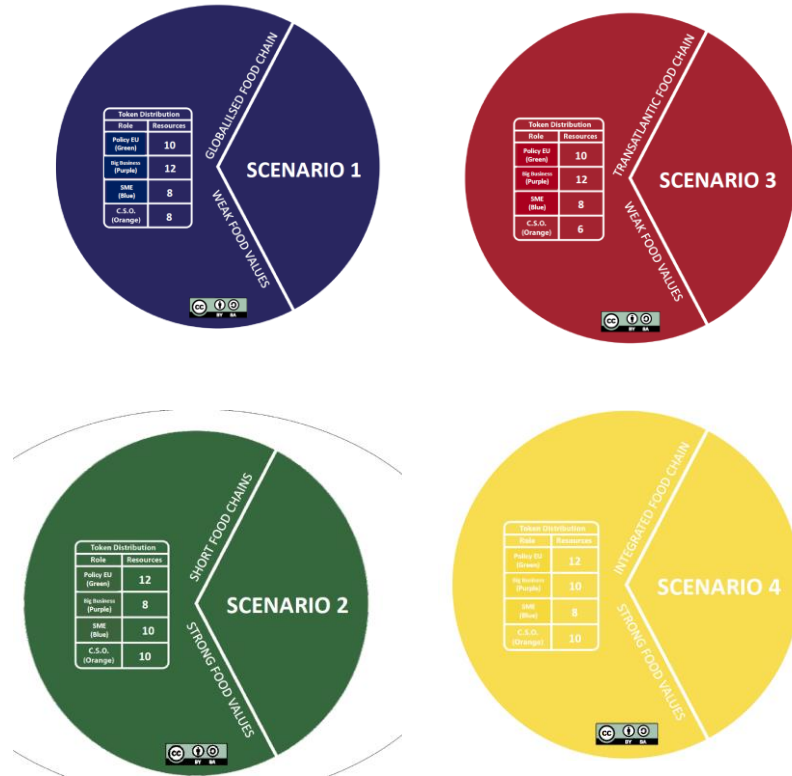
*Variation:* the session is best played with the Public Voice having to place at least one token on each action. Allowing the Public Voice to deny an action of any token increases strongly his/her potential impact on the outcome of the scenario exploration.

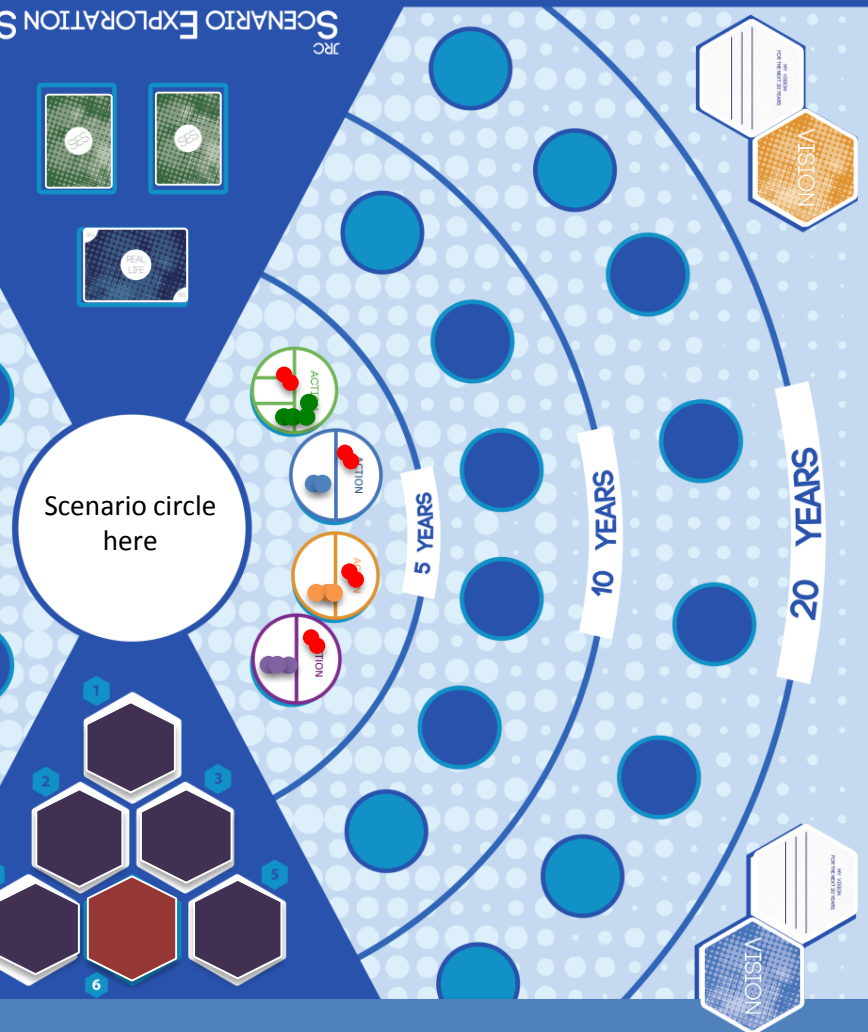


# Exploration: Preparation

The participants pick one scenario to explore and select a theme on which the session will focus. In the second phase, a different scenario will be explored.

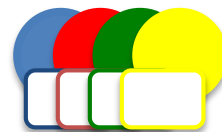
The coloured disk corresponding to the selected scenario is placed on the circular space in the middle of the SES board and the corresponding *Scenario Detail cards* are placed on their indicated positions on the board.





# Round 1 Example

The Exploration Master will set up the board at the start of each session with the following components:



One scenario circle card and its corresponding detail cards are placed on the board.



Real Life cards are placed face down in the appropriate space.



Megatrends placed in the spaces marked 1-5. The variable driver cards are placed face down in space number 6.



All Action cards and Resource Tokens (R.T.s) are handed out.



The Public Voice gets its 30 Future Impact Tokens (F.I.T.s)

# Exploration: Preparation

The Exploration Master distributes the record sheets to all participants. **Participants introduce themselves.** They now take a few minutes to **choose a role in line with the selected theme and provide a rationale for their choice.**

**The four actors define their role and long-term vision in detail** ("*where does your organization want to be in 20 years?*"). The business actor should have a clear business plan, define its location, size, market, suppliers, etc. Business actors may keep their visions secret. The civil society organization must define its scope, objective, membership, etc. **At least one of the policy makers should be at EU level**, while the other should be a local or national level policy maker.

**The Public Voice defines its own profile (socio-economic positioning, political opinion, aspirations, etc...).** It must define **clearly the perspective or philosophy that it will represent and explain it to all.** The public is not homogeneous and the person is free to choose any sufficiently representative standpoint (at least 15-20% of public opinion).

The Real Life cards are placed face down on the board.

**All explorers except the Public Voice pick two *Real Life* cards that they keep secret. They can use only one card at each round, of their own choice,** according to the instructions on them (usually at the end of the round). After having used a card, they pick a new one from the pile so as to have the choice between two cards at any time.

The variable driver card at the top of the pile is revealed.

# Phase 1 - Round 1:

**We are now entering the future! We imagine that we are five years into the future, moving towards our scenario!**

The Exploration Master reveals the 5-year scenario detail cards on the board. He reads them and builds a story including the six elements that they contain (numbered 1 to 6). The cards describe a set of events that unfolded over the five years leading us into Round 1. **All explorers roll the die** (not the Public Voice). **The highest score plays first**, the others follow clockwise. **Each explorer must take the element of the scenario detail card corresponding to their die score more particularly into account.**

**Explorers get 3 min to define what action they want to take. They write what their action is and how many tokens they use to support it on their record sheet.**

**They then have 1 min to place their Action Card and corresponding RTs on the board and give a verbal explanation for the action.**

**Once all four explorers have acted, the Public Voice explains its perspective on each action and its overall perspective on the situation and distributes *Future Impact Tokens*. The FITs reflects the Public's opinion on how each action will influence the next round (5 years later). Then, Real Life cards can be used.** Some can be used earlier (see specific instructions on the cards).

Scores are calculated after all Real Life cards have been used. **The Public Voice then publishes 2 headlines about the round on its record sheet and presents them, along with the token distribution.**

**The explorers that have used a Real Life card pick a new one so they hold two at the start of every round.**

The Exploration Master records the scores.

# Phase 1 - Round 2:

**We are now ten years into the future!** A new Variable Driver is revealed that will affect this round. The previous one is placed at the bottom of the pile.

The Exploration Master describes briefly what happened in Round 1, and then reveals, reads and builds a story based on the 10-year Scenario Detail cards. These cards describe events that have taken place over the five years separating us from Round 1.

**All explorers roll the die. The one with the highest score plays first. Each must take the element of the scenario detail card corresponding to their die score more particularly into account.**

**All explorers get 3 min to define what action they want to take in this context.** They write what their action is and how many tokens they use to support it on their record sheet.

**The explorers then have 1 min to place their Action Card and corresponding *Resource Tokens* on the board and give a verbal explanation of their rationale.**

**The explorers who want to collaborate invite others to do so when it is their turn.** The invited explorers who accept to collaborate put *Resource Tokens* on the corresponding action(s).

**Once all four explorers have acted, the Public Voice gives its overall perspective on the situation and distributes *Future Impact Tokens*.** The *F.I.T.* score reflects the Public's opinion on how each action will influence the next round (10 years later). **Then, Real Life cards can be played. Some can be played earlier (see specific instructions on the cards).**

The Public Voice then publishes 2 headlines about the round, presents them to the group, and writes them on his record sheet, along with the token distribution.

Scores are calculated after all Real Life cards that explorers wanted to use have been revealed. The explorers that have used a Real Life card pick a new one from the pile.

# Phase 1 - Round 3:

**We are now twenty years into the future!** A new Variable Driver is revealed that will affect this round. The previous one is placed at the bottom of the pile.

The Exploration Master describes briefly what happened in Round 2 and then reveals, reads and builds a story based on the 20-year Scenario Detail cards. They describe a set of events that have taken place over the ten years separating us from Round 2. **We are now fully into the scenario.**

**All explorers roll the die. The one with the highest score plays first. Each must take the element of the scenario detail card corresponding to their die score more particularly into account.**

**All explorers get 3 min to define what action they want to take in this context.** They write what their action is and how many tokens they use to support it on their record sheet.

As in the previous rounds, the explorers then have 1 min to place their Action Card and *Resource Tokens* on the board, and give a verbal explanation.

Once all four explorers have acted, the Public Voice gives its overall perspective on the situation and distributes the remaining *Future Impact Tokens*. The *F.I.T.* score reflects the Public's opinion on how each action will influence the long-term. **Then, Real Life cards can be used. Some can be used earlier (see specific instructions on the cards).**

The Public Voice then publishes 2 headlines about the round, presents them to the group, and writes them on his record sheet, along with the token distribution.

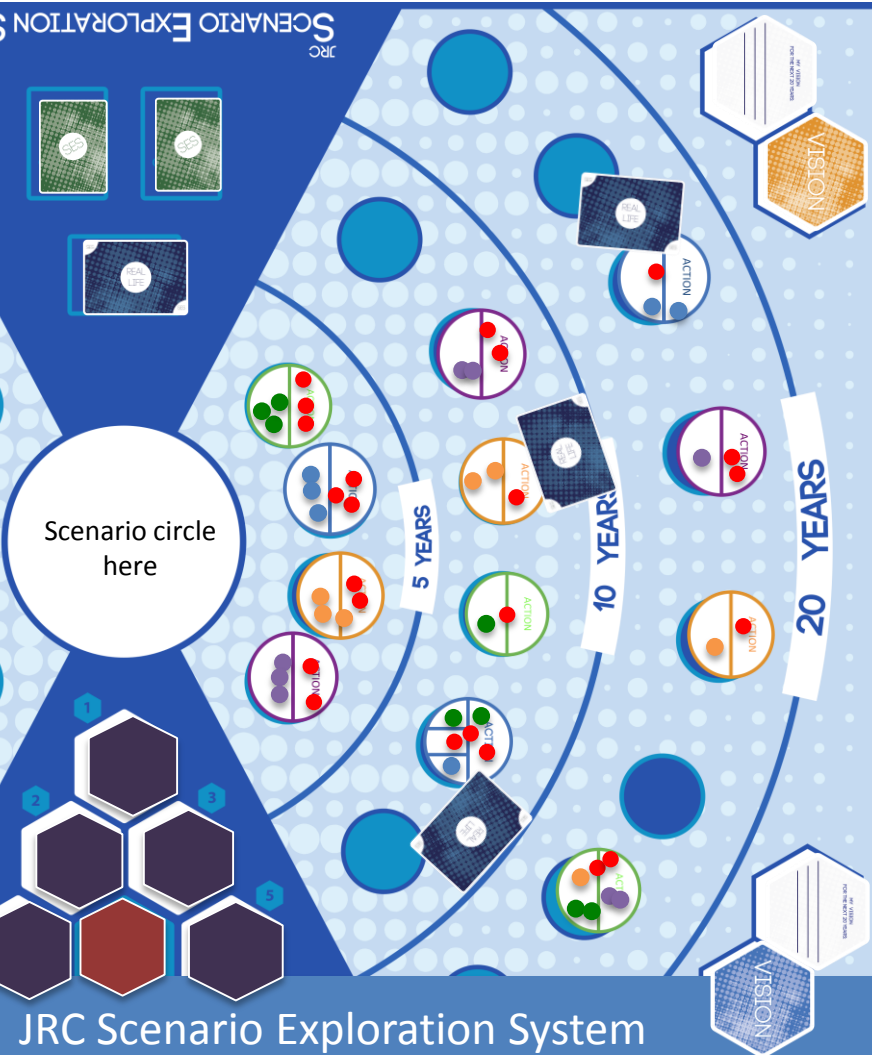
Scores are taken after all Real Life cards have been played.

# Phase 1 Example

One complete phase of scenario exploration (round 1-3 completed) can look like the example on the left. The scenario has developed across all three rounds and each detail card has been revealed.

The explorers have acted according to their role, resources, and the vision they want to reach. The Public Voice has determined the influence those actions have had over the course of the exploration.

Note the collaborations in rounds 2 and 3.



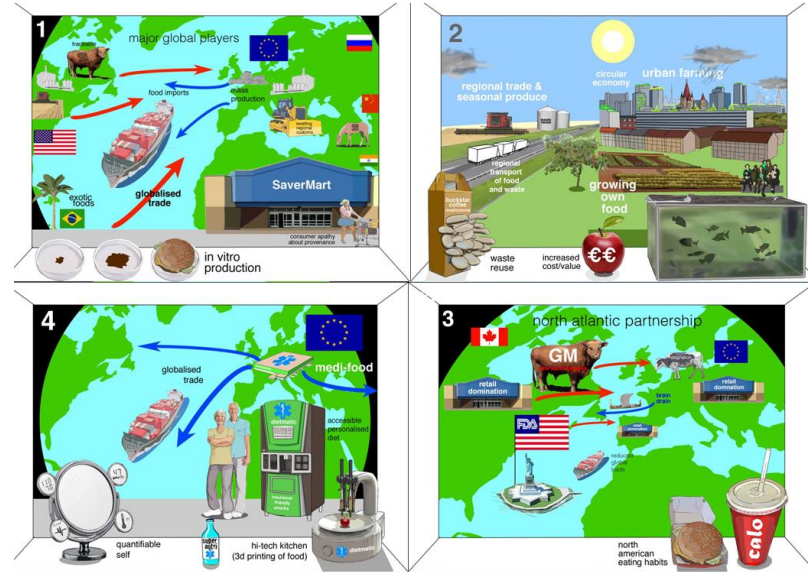
# Phase 1 - Wrap up

The Exploration Master describes briefly what happened in Round 3 and summarizes the events that unfolded over the three rounds, and tallies the scores of all explorers over the three rounds to determine who is the point winner.

The secret visions are revealed and a collective assessment is made of how close each explorer came to their objective and of how close this sequence of events has brought us to a sustainable future.

## Phase 2

Players now focus on the other half of the board. The Exploration Master selects a contrasting scenario and places the corresponding coloured disk on the circular space in the middle of the game board. The Scenario Detail cards are placed on their slots along the axes on the board. **Each explorer keeps the same role and the same vision at the beginning of phase 2.** Phase 2 exploration is identical to that of Phase 1.





# Phase 2 – Wrap up & Session Unpacking

The Exploration Master describes briefly what happened in Round 3 and summarizes the events that unfolded over the three rounds, and tallies the scores of all explorers over the three rounds to determine who accumulated the most points.

The secret visions are revealed and a collective assessment is made of how close each explorer came to his/her objective and of how close this sequence of events has brought us to a sustainable future.

At that point, the session is over and an unpacking conversation can start. Important points to discuss are for example:

- How do you feel?
- How different were the outcomes of both scenarios?
- Do the stories that were created make sense?
- Have the participants learned something from the session?

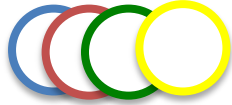
- How did the visions for the various roles stand the test of time?
- Has the game caused a change in attitude of the participants regarding one or another issue?
- Would the participants be ready to do it again with different people?
- Is there any interest from the participants in using this platform to investigate a particular issue?

Record sheets can be collected and exploited further if there is a specific need.

# Material:

Each Scenario Exploration System (SES) is composed of the following game pieces.

## Scenario Cards



The circular scenario cards give an overview of the social and economic conditions created by the scenarios.



Scenario details cards provide a sequence of events at 5-year, 10-year, and 20-year horizons leading to each scenario.

## Megatrends and Drivers Cards



Megatrend cards present strong driving forces that affect all scenarios.



Variable driver cards present less certain drivers that have the potential to affect any scenario.

## Action and Vision Cards



Role specific action cards are assigned to each explorer.



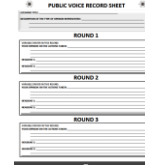
Vision cards are written by each player outlining and defining their goals for the session.

## Real life Cards



**Real life cards** present real life events that can affect any action

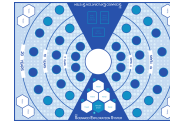
## SES Components



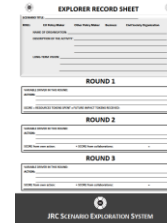
Public Voice Record Sheets allow recording of its tokens allocation and headlines



Resource Tokens (color coded to match each role)  
Red Future Impact Tokens for the Public Voice



One exploration board (A0 size) &  
One six sided game die.



Explorer Record Sheets help the explorers define their roles and give an account of their actions.