

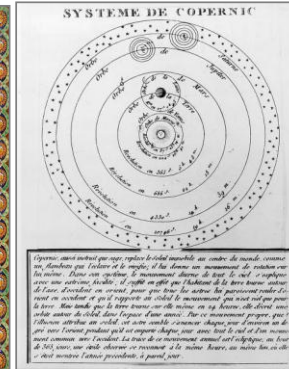
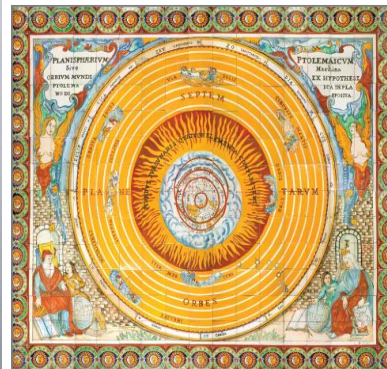
Recollections of a Foresight Consultant

An Insiders Guide



Riel Miller, Head of Foresight, UNESCO, Paris

Toronto, July 27, 2012



2005 to 2012 Public Sector Clients

Brunei: Ministry of Education; **Canada:** Agriculture Canada, Alberta Health Services, Alberta Innovates Technology Futures, Defence Research and Development Canada, Health Canada; Office of the National Science Advisor, Policy Research Initiative; **European Commission:** Directorate of Administration, Directorate for Employment, Directorate for Research, Institute for Prospective Technological Studies, European Joint Research Council, Office of Harmonization of the Internal Market; **Finland:** Ministry of Labour, Tekes; **France:** Ministry of Finance, La Poste; **Ireland:** National Economic and Social Development Office; **Korea:** Korean Development Institute; **NATO:** Joint Intelligence Center; **New Zealand:** Ministry of Labour, Secondary Futures; **Norway:** NordForsk: The Nordic Research Council, Research Council of Norway; **Oman:** Research Council; **OECD:** Directorate for Public Governance and Territorial Development; **Organisation of African States:** Observatory of Science and Innovation; **Singapore:** Prime Minister's Office; **Scotland:** Scottish Enterprise; **Spain:** Consortium for the Commercial Promotion of Catalonia; **Turkey:** Turkish Council of Higher Education; **United Nations:** UNSECO, UNDP; **United States of America:** US Army

2005 to 2012 Private Sector Clients

Telebrasil, Brazil; Europ Assistance, France; Cartes Bancaires, France; Gemalto, France; Philips Design, Netherlands; Alstom, Switzerland; Promethean Ltd., UK; Cisco Systems, USA.

2005 to 2012 Post-Secondary Clients

Ottawa University, Canada; Aalto University, Finland; Turku School of Economics, Finland; American University of Paris, France; Université Montpellier, France; Sciences-Po, France; Autonomous University of Mexico, Mexico; University of Minho, Portugal; The Open University, UK; The Oxford Internet Institute, Oxford, UK; University of Jyväskylä, Finland.

2005 to 2012 NGO & Foundation Clients

Ateliers de la Terre, France; The Renault Foundation, France; Center for Curriculum Redesign, USA; McGraw-Hill Foundation, USA; Open Society Institute, Hungary; Quality and Leadership for Romanian Higher Education, Romania; Climate Change and Development Knowledge Network, UK; SMART(Global Change SysTem for Analysis, Research and Training), USA.



In 1898 the first international urban-planning conference convened in New York. It was abandoned after three days, instead of the scheduled ten, because none of the delegates could see any solution to the growing crisis posed by urban horses and their output.

Agenda

9–10:30 Preparing	<u>Why foresight</u> (Riel 30 minutes) <u>Know yourself</u> (Andy 30 minutes) Personal branding <u>Know your audience</u> (Andy 30 minutes) Foresight Audit
10:30–10:45 BREAK	
10:45– 12:00 Preparing	<u>How we spend our time</u> (Riel 30 minutes) 1/3 selling, 1/3 marketing, 1/3 billable hours, 1/3 R&D <u>Approaching Engagements</u> (Andy 30 minutes) TATF framework Kickoff diagnostic <u>Challenges of Foresight work</u> (Riel 15 min.)
12:00–1:00 pm LUNCH	



- Is there a need?

- Is the product distinctive?

Start With a Product!

- Can you supply it AND at high quality?

- Can you market the product?

- Can you sell the product at a price that sustains your business?

- Can you continue to develop the product?

- Are you motivated by the product?

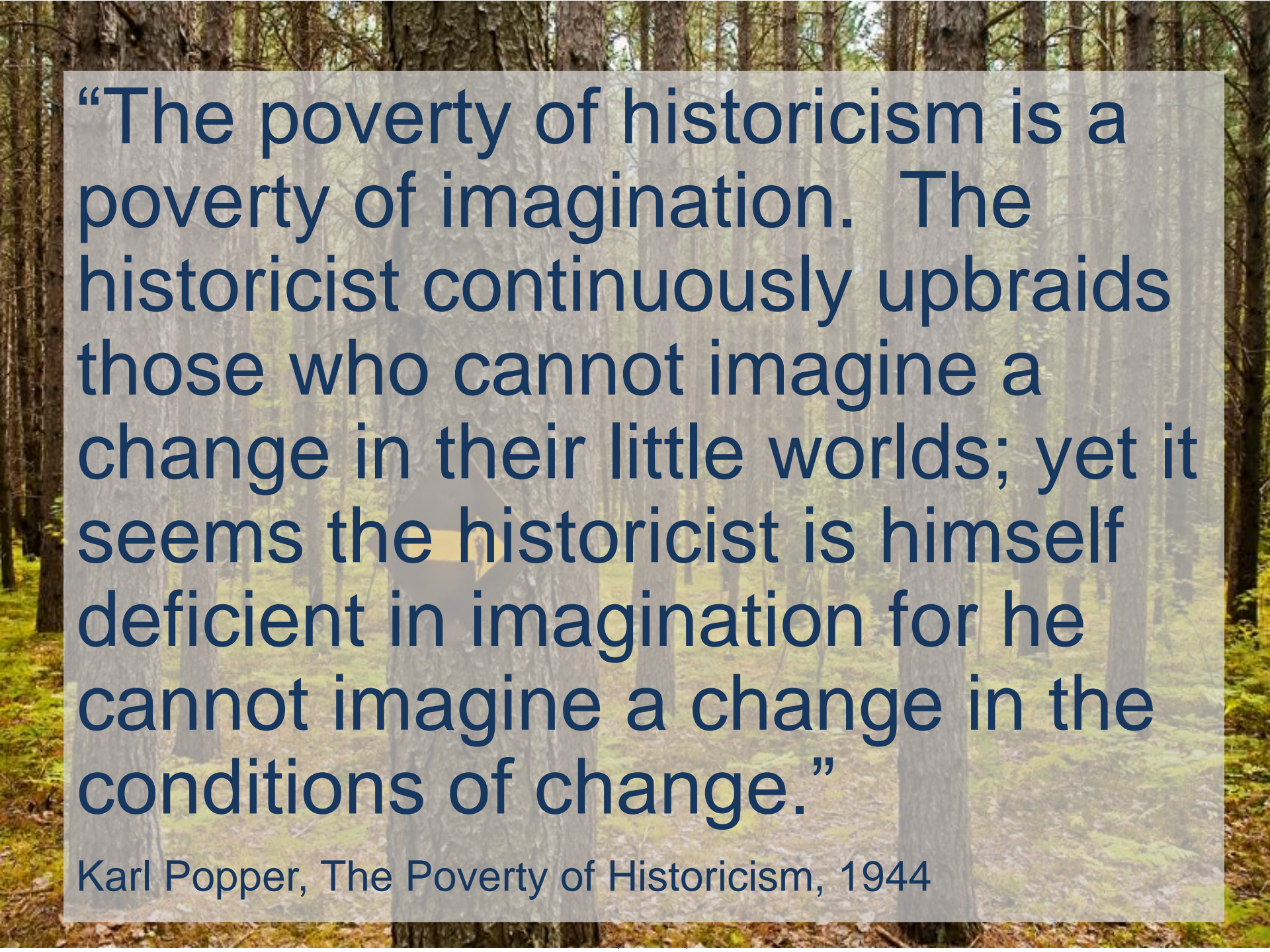
- Does the product sell itself?

- Distinguishing yourself and the product...

- reconcile greater freedom with collective choices?

Motivating Questions

- embrace greater diversity without inviting fragmentation & chaos?
- foster greater creativity without increasing burn-out & stress?
- inspire responsibility?
- motivate change without resorting to fear?
- manage risk without hierarchy?
- combine respect for complexity while still gaining depth of understanding?



“The poverty of historicism is a poverty of imagination. The historicist continuously upbraids those who cannot imagine a change in their little worlds; yet it seems the historicist is himself deficient in imagination for he cannot imagine a change in the conditions of change.”

Karl Popper, *The Poverty of Historicism*, 1944

Support to mutual learning between Foresight managers, practitioners, users and stakeholders of policy-making organisations in Europe

Online Foresight Guide

[Home](#)[Why do Foresight?](#)[Conditions to analyse](#)[Scoping an exercise](#)[Methodology](#)[Running an exercise](#)[Follow-up](#)[Case studies](#)[Mutual learning](#)[News & events](#)[An A to Z of Foresight](#)

Foresight is a systematic, participatory, future-intelligence-gathering and medium-to-long-term vision-building process aimed at present-day decisions and mobilising joint actions. Research and innovation policies are based on (implicit or explicit) visions of the future of science, technology and society.

To underpin the establishment of the European Research Area (ERA) there is a need for open coordination of these visions and hence cooperation on Foresight.

One of the European Commission's main Foresight activities under the Sixth Framework Programme is to establish a European Foresight **Knowledge Sharing Platform** (KSP). The KSP aims to provide support and enhance the interconnections between Foresight programmes, initiatives and institutions in close co-operation with all relevant actors in Europe and, when necessary, orienting them towards common issues, at inter-regional, trans-national or European level.

The KSP is today a major European Union undertaking which is being implemented by DG Research. One of its core activities is to support mutual learning among Foresight managers, practitioners, users and stakeholders in Europe (FOR-LEARN). The FOR-LEARN project is run by **DG JRC-IPTS** on a mandate from the European Commission DG RTD. It covers the entire range of activities related to the promotion and the structuring of a European science and technology Foresight area.

The three main functions of the KSP are:

- To mobilise Foresight as intelligence for EU policy, mainly research and innovation policy;
- To foster exchanges of experiences between Member States and regions; and
- To consolidate and better structure the Foresight knowledge base.

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- [Projects](#)
- [FTA Conferences](#)
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Welcome to the European Foresight web site

The work of the European Foresight team of the Knowledge for Growth (KfG) Unit of JRC-IPTS centres on the provision of forward looking intelligence to support decision making and enhancing the use of Foresight as an instrument for policy making in Europe.

The focus of our activities is increasingly on more policy-relevant foresight application and methodology development, particularly by developing approaches to the early identification of emerging issues that will have an impact on European policies.

We are also broadening our scope beyond research and innovation policy to a more general application of Future-Oriented Technology Analysis (FTA), including application of combined qualitative foresight and quantitative modelling approaches.

European Foresight Business in Short

A fundamental premise of the European Foresight activities is that future-oriented thinking is a necessary policy response component to the environment of accelerated socio-economic and technological changes.

Therefore, future-oriented technology analyses (FTA) and studies (including strategic Foresight, forecasting and technology assessment) are embedded in the activities undertaken by the European Foresight team to deepen the understanding of changing challenges and opportunities.

This is done to enable policy makers to look into the future in order to identify and choose among policy options, rooted in numbers whenever feasible, as well as to shape long-term policies and actions.

Moreover, the accumulated expertise and the neutrality of JRC-IPTS distinguish it from other EU organisations involved in foresight and FTA.

This allows JRC-IPTS to increasingly become a prominent partner within different Framework Programme consortia.

JRC-IPTS has also become a natural central node in leveraging a platform for mutual learning as well as knowledge development and sharing by bringing together widely recognised experts and stakeholders in general.

Highlights

NEW

EU and the State of the World in 2025:

[Give your opinion...](#)

Associated Links



[Future-Oriented
Technology Analysis
International
Conference](#)



[Online Foresight Guide](#)



[Institute for
Prospective
Technological Studies](#)



Welcome to the European Foresight Platform

The European Foresight Platform (EFP) is a program supported by the European Commission's Framework Programme 7 and aims at building up a Europe-wide and international (i.e. global) network of networks bringing together different communities and individual professionals related to foresight, forecasting and future studies in general.

Click [here](#) for more information or contact the project coordinator:
Susanne.Giesecke@alt.ac.at

Popularity: unranked

Workshop "Foresight in public research organisations"

Location: Vienna, Institut Français de Vienne, Palais Clam-Gallas, Vienna Organisers: Austrian Institute of Technology, Cemagref, French Embassy in Vienna/Institut Français de Vienne
 Date: 7th and 8th of June 2011 Background and aim of the workshop: In a knowledge-based society and economy it is increasingly difficult for research organisations to define forward-looking strategies and research priorities.

Author : [beatricer84](#)

[read more...](#)

EFP Brief No. 180: Emergence and Design

Upcoming Events

Workshop "Foresight in public research organisations"

[View All Events](#)





Science

beyond

Fiction

fet 09 | 21-23 April 2009 | Prague

The European Future Technologies Conference



The **European Future Technologies Conference and Exhibition** is a new European forum dedicated to frontier research in future and emerging information technologies. Leading scientists, policy-makers, industry representatives and science journalists will convene over 3 days to discuss today's frontier science, tomorrow's technologies and the impact of both on tomorrow's society.



The European Commission's **Future and Emerging Technologies** research scheme



The Academy of Sciences of the Czech Republic



The Czech Technical University in Prague

[Home](#)

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[What is FET09?](#)

[Programme](#)

[Exhibition](#)

[Media Centre](#)

[Venue-Accommodation](#)

[Registration](#)

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What's new?

Press Conference materials

The final **Conference Programme** is online.

Visit the **Exhibition and Poster sessions!**

Submit an **On-the-fly**

Home**Resources****Performance**

- » The competitiveness of Finland
- » Doctoral degrees
- » Scientific publication
- » Innovation
- » High technology foreign trade
- » Patents
- » Science and technology evaluations
- » **Foresight**

Research environments**Viewpoints****What's new****Feedback****Search**

Finnish Innovation system

Finnish science policy

Technology and Innovation policy

Foresight [Print this page](#)**FinnSight 2015**

The FinnSight 2015 foresight project of the Academy of Finland and Tekes relies on perspectives from science, technology and society. The project will examine changes in the global operating environment, emerging needs of business and society, and development perspectives in science and technology. Work of this type is needed in order to meet the challenges of innovation and research activity promptly and successfully. The main target of the foresight project now beginning is to use ten expert panels to help identify important joint future areas of expertise for science, technology, business and society. This will lay the foundation for new internationally competitive centres of excellence and expertise clusters. The panels include about 120 external experts whose work is supported by specialists from the Academy of Finland and Tekes.

Organisations:

- » [Tekes - the Finnish Funding Agency for Technology and Innovation](#)
- » [Academy of Finland](#)

Documents, publications:

- » [FinnSight 2015](#)

19.9. 2005 Tekes

Foresight

Any words All words Exact phrase

Search

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New project published

The Foresight project [Global Food and Farming Futures](#) examined how a rapidly expanding global population can be fed in a healthy and sustainable way. The project's new report [helps identify](#) a wide range of possible actions to meet the challenges facing food and farming, both now and in the future.



1 Linking policy on climate and food

2 New project chair announced

3 New project published

Visit our partner site

Government Office for **Science**

Visit our partner site

 COUNCIL FOR
SCIENCE AND
TECHNOLOGY

Our role is to help government think systematically about the future

We use the latest scientific and other evidence combined with futures analysis to tackle complex issues and help policy makers make decisions affecting our future.

Foresight reports directly to the Government Chief Scientific Adviser and the Cabinet Office. It is a part of the [Government Office for Science](#) within the [Department for Business, Innovation & Skills](#).

Current projects

- [Global Food and Farming Futures](#)
- [International Dimensions of Climate Change](#)
- [Global Environmental Migration](#)

A fifth wheel?

- Information gathering
- Information sharing
- Branching probabilistic studies (forecasting)
- Agenda setting
- Due diligence on long-run
- Legitimacy through surveys and participation
- Planning...

Who does it better?

- Disciplinary specific information gathering & sharing, analysis & policy
- Existing communities and cross-disciplinary problem solving
- Systems analysis and predictive sciences
- Visionary leaders, gurus, and herd extrapolation
- Democratic institutions and processes
- Planners with critical path capabilities and

Downside...

- Go faster in the wrong direction
- Muddle the picture
- Hypocritical – claim to address change but the aim is preservation & rejection of the inconsistent, systemically contradictory
- Seeding fear

Upside... where else to:

- Embrace complexity and the beauty of novel emergence
- To improve the way we “use the future” across a wide range of futures
- Develop and diffuse the capacity to match our aspiration for freedom with our approach to the future
- Building capacity to both overcome poverty of the imagination as systemic change, birth and death generate changes in the conditions of change

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Process as Product: 4 in 1

This was the xperidox approach

Experimentation: “action research” and learning-by-doing enables a *process as product* approach that integrates:

- 1) client search and development,
- 2) marketing,
- 3) billable days, and
- 4) research and development.

Through a *doing it* approach: speeches, workshops, courses, designing projects, implementing

ILLITERATE?

WRITE FOR FREE HELP.

What is Futures
Literacy?

www.StrangeCosmos.com

Futures Literacy is the
**capacity to tell
anticipatory stories**
using rigorous imagining
based on sharing depth
of knowledge from across
the community.

Futures Literacy is a way of internalizing the constant development of our understanding of the **emergent present** and of changing anticipatory assumptions.

Futures Literacy is:

Three basic building blocks:

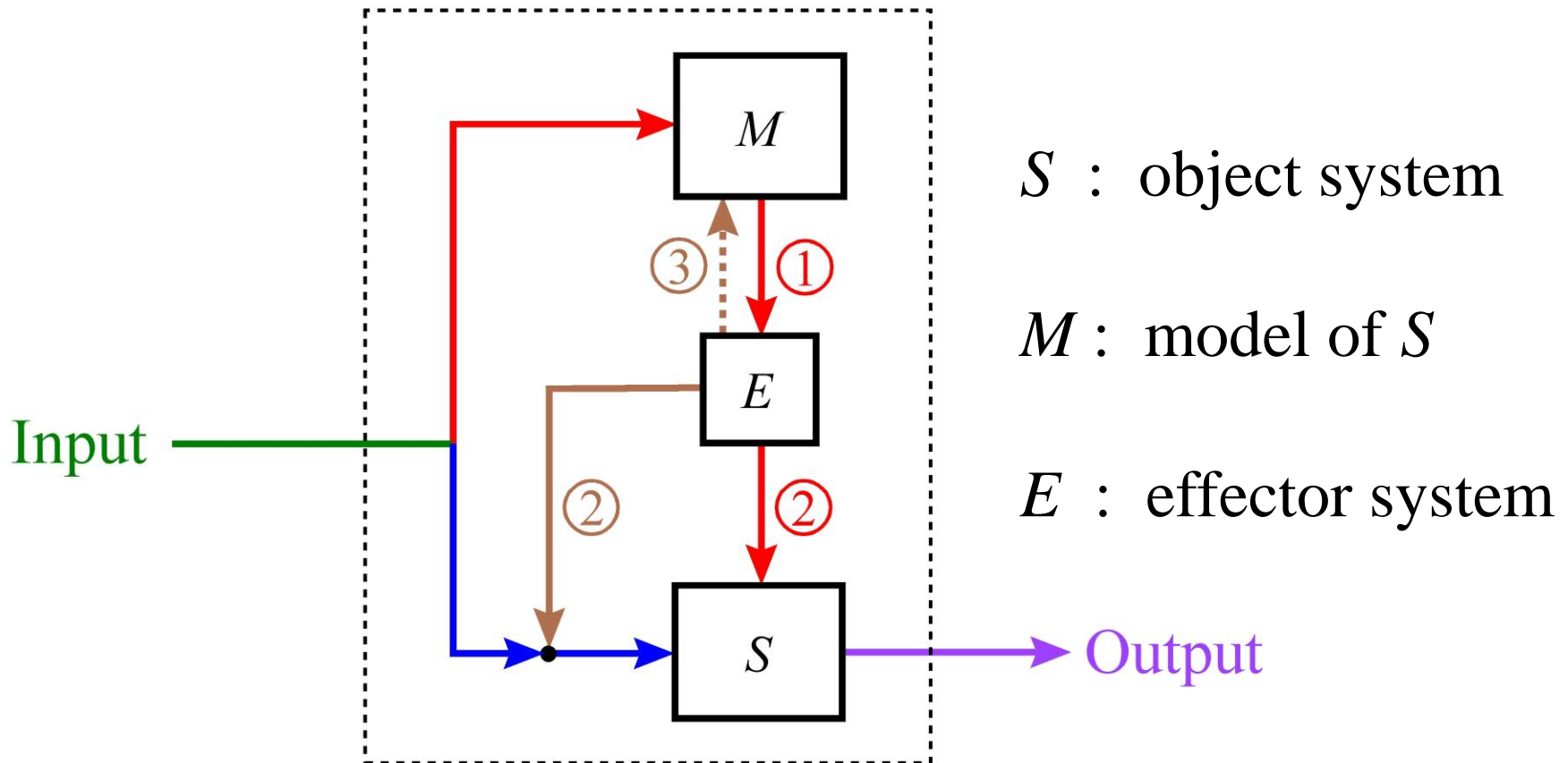
- A. Anticipatory systems** perspective that encompasses both animate and inanimate anticipation.
- B. Three distinct dimensions** for imagining the future and the different methods that are related to each dimension.
- C. Action research & collective intelligence:** A learning process that uses collective intelligence – action research processes for reframing and questioning anticipatory assumptions – building the capacity to embrace complexity, spontaneity, improvisation

Step A: Bugs Bunny Anticipates



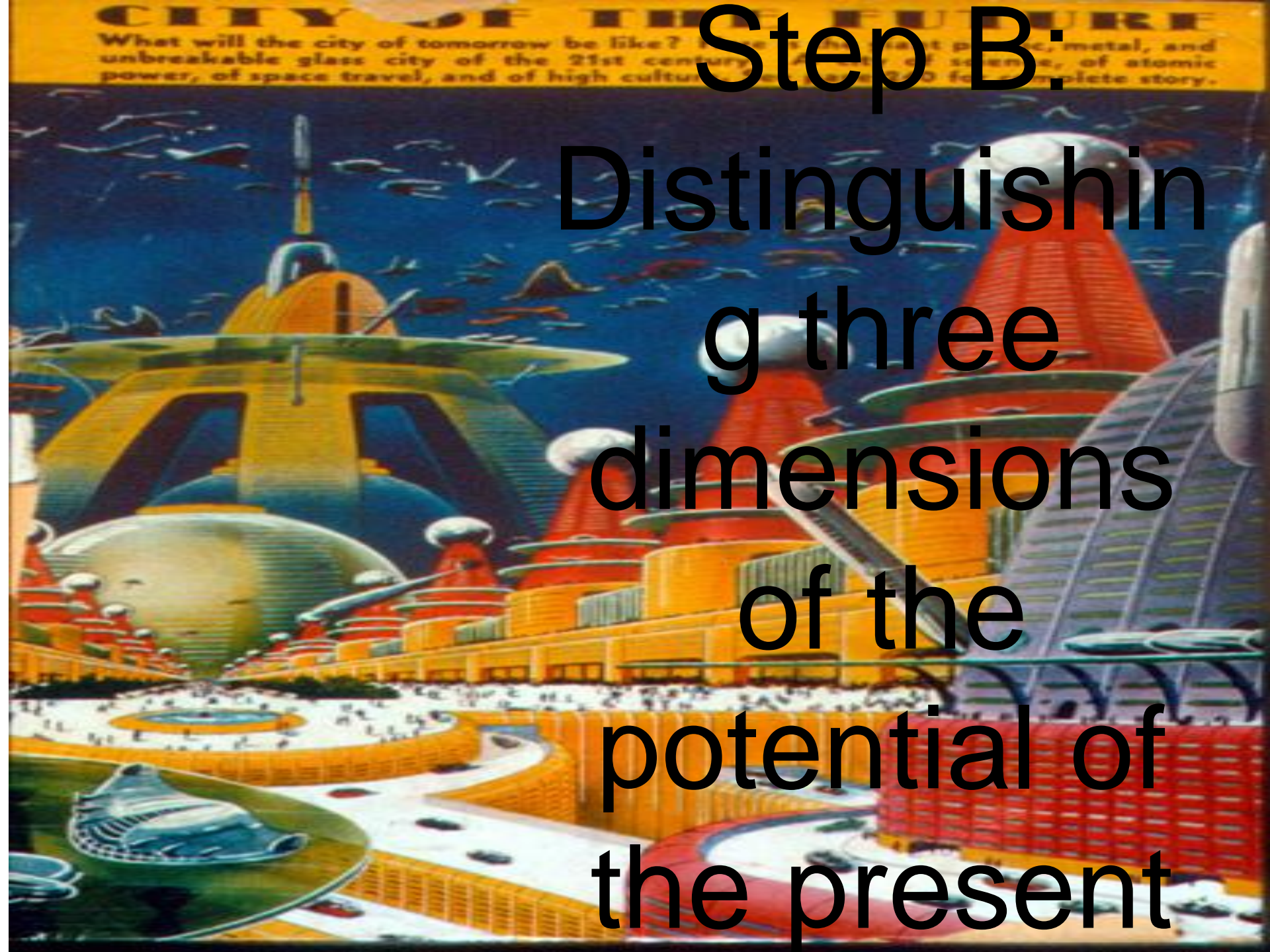


Taking an Anticipatory Systems View



CITY OF THE FUTURE
What will the city of tomorrow be like? ... unbreakable glass city of the 21st century ... of science, of atomic power, of space travel, and of high culture ...

Step B:
Distinguishing three dimensions of the potential of the present

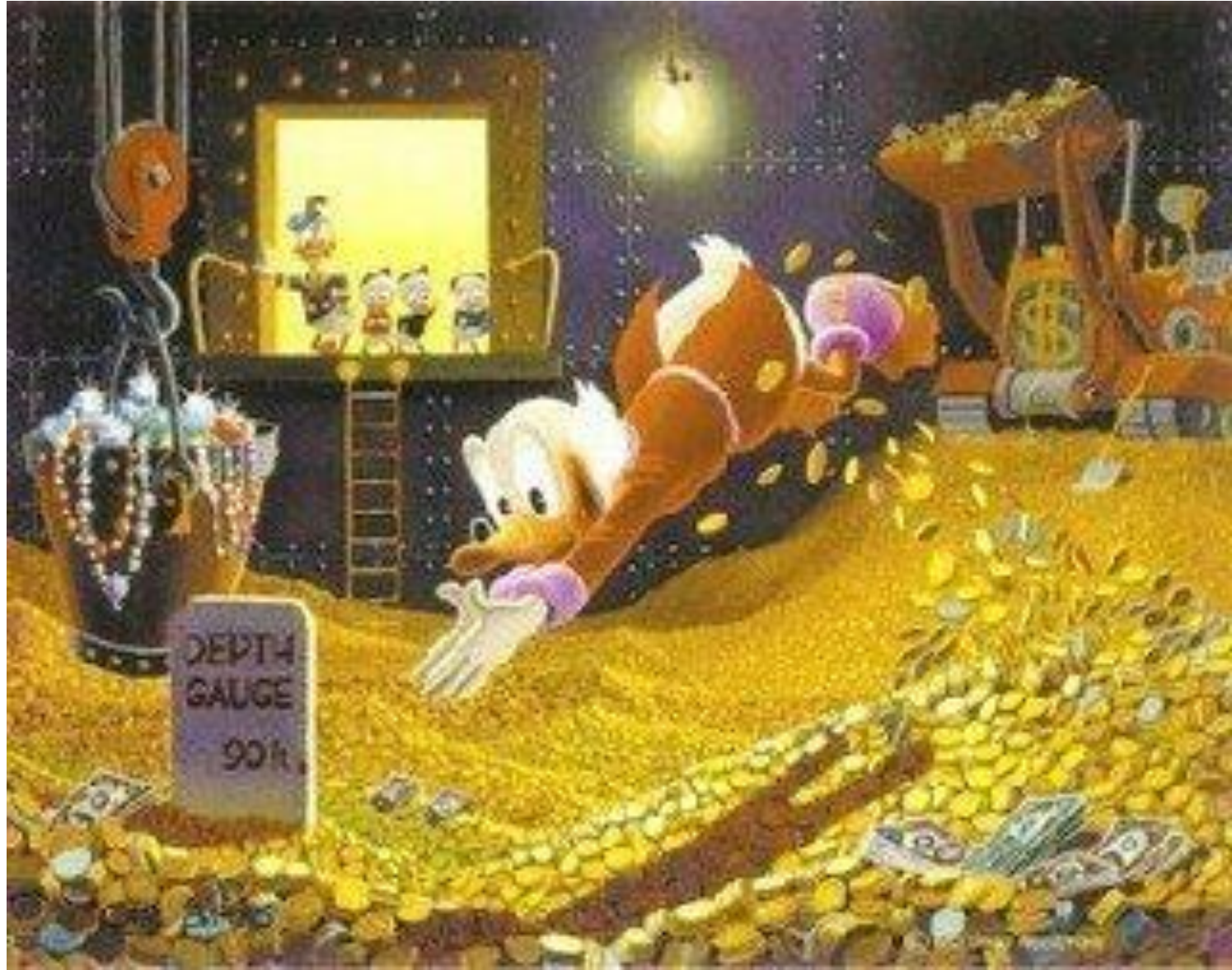


Contingency futures: a tsunami

THE DAY AFTER TOMORROW
WHERE WILL YOU BE?

IN THEATERS WORLDWIDE MAY 28, 2004

Contingency futures: winning the lottery



How does the anticipatory
system function?

Simulation



Optimization Futures: Chess, Farming, Assembly Line



- **Goal**, known in advance & fixed
- **Rules**, given in advance & fixed
- **Resources**, given in

Optimization is Complicated: A Computer Can Do It

May 11th, 1997

Computer won world champion of chess

(Deep Blue)

(Garry Kasparov)



(Reuters = Kyodo News)

Embracing complexity: use the future,
imagining the potential of the present





- **Contingency**: simulation and drill, sensing and transparency.
- **Optimization**: better calculation - extrapolations, gain clarity and familiarity with the rules, reform strategies.
- **Embrace complexity**: imagining changes in the conditions of change, constantly reinventing the potential of the present, multi-ontology anticipatory system.

Anticipatory Methods: Context Makes a Difference

Complex

Embrace
complexity

Optimization
(chess game)

Simple

Closed

Open

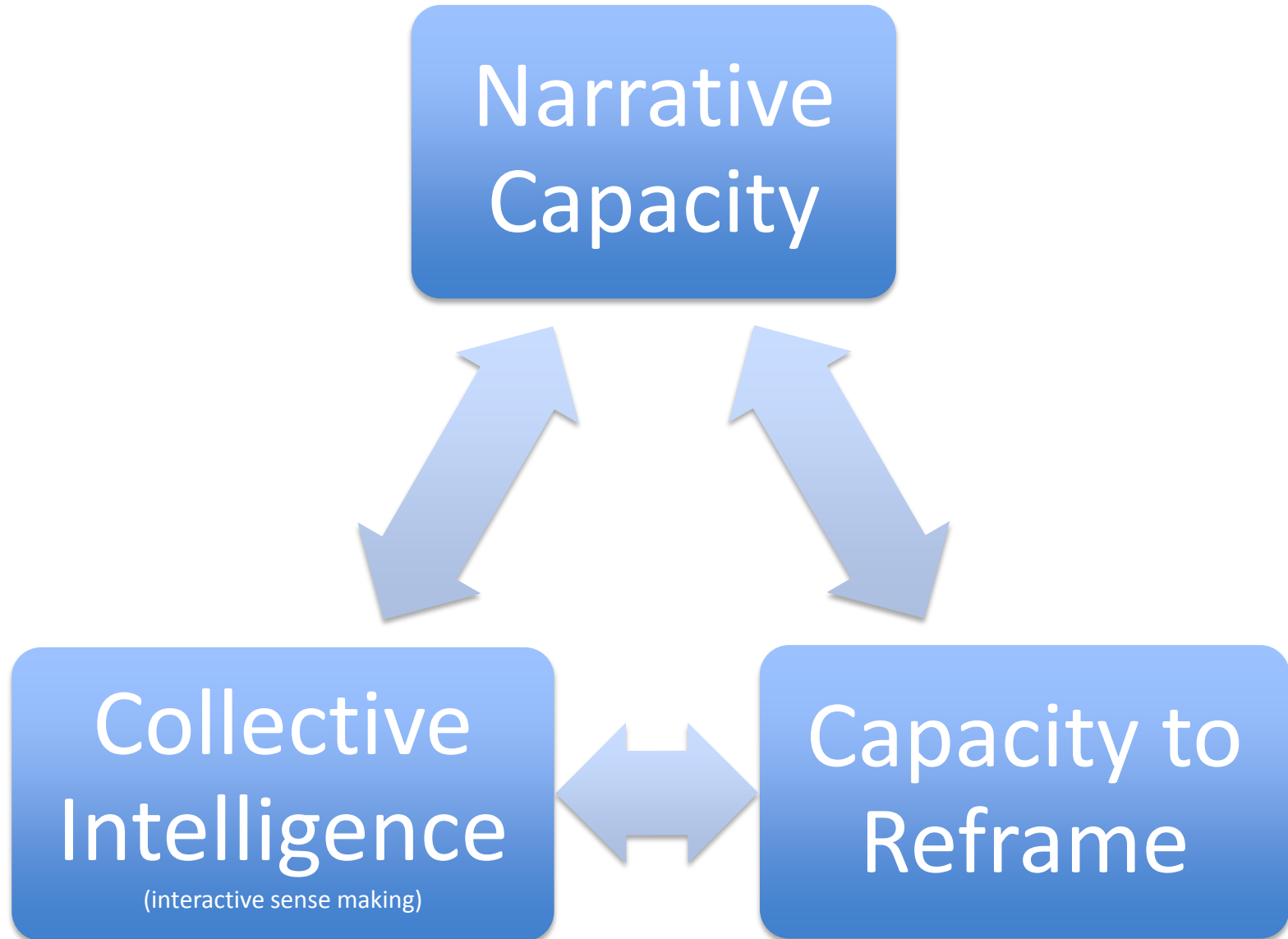
Align Dimensions of the Future with Methods
Use Futures Literacy

Step C: Rigorous Imagining



Action
research &
collective
intelligence:
Using
reframing of
anticipatory
assumptions
to develop rich
stories of
imaginary

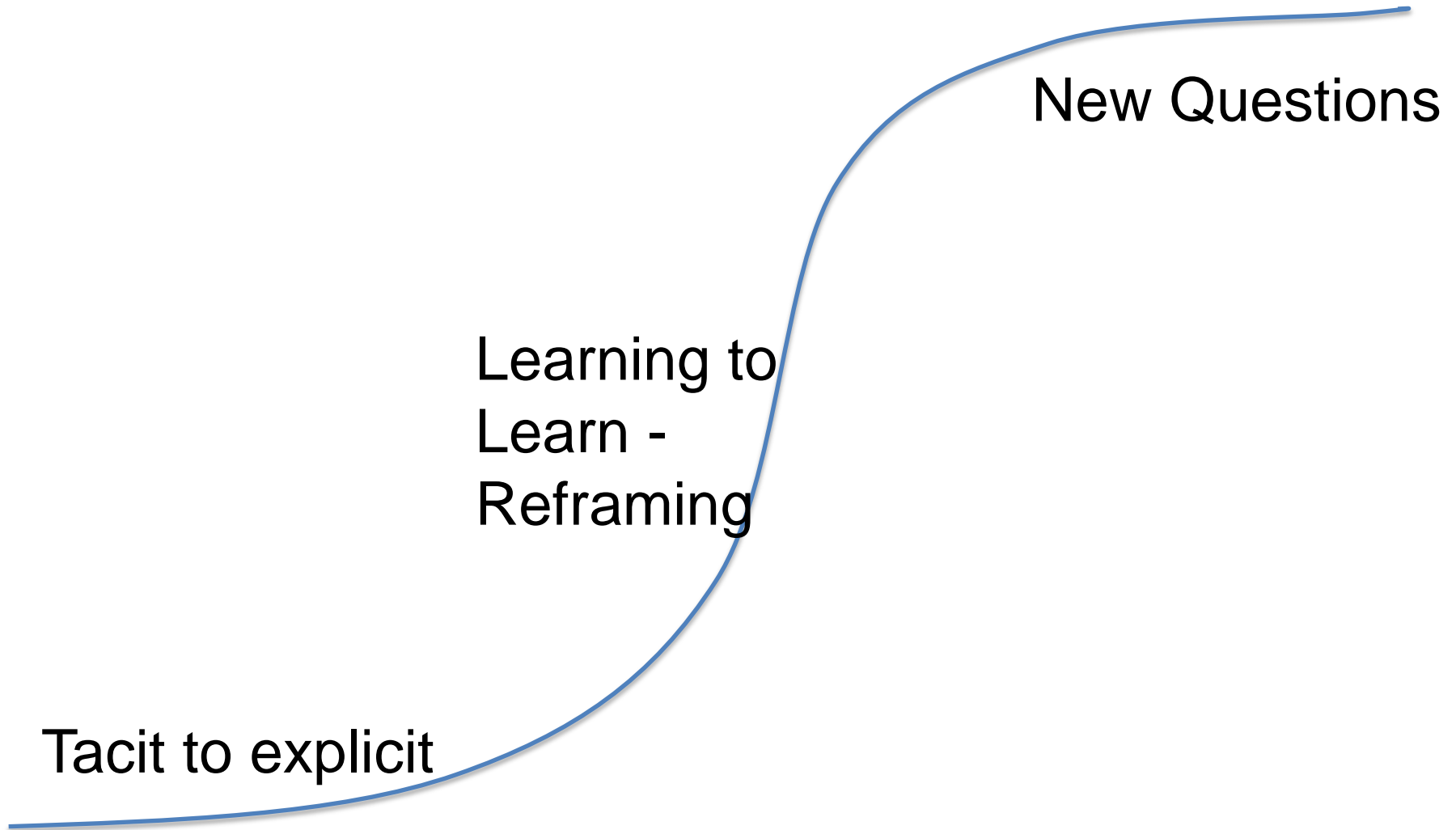
Rigorous Knowledge Creation: Action Research



Becoming Futures Literate as Knowledge Creation

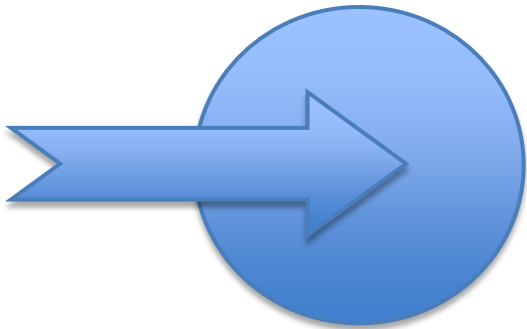
- Level 1 Making the Future Explicit
 - Temporal awareness, values, expectations – initial anticipatory assumptions
- Level 2 Frames and Sense Making
 - Rigorous imagining - reframing
- Level 3 Making Sense and Doing
 - Strategic choices

Learning Curve

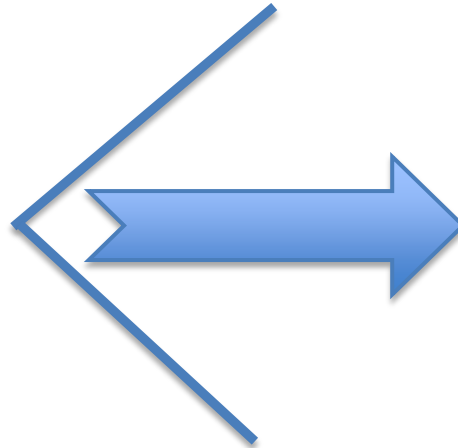


Deliberate Thinking: Policy-Action

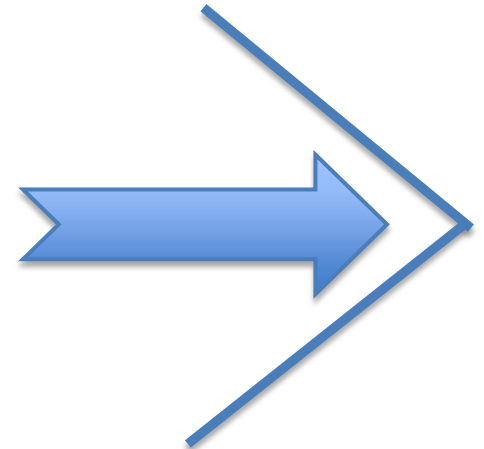
(from Edward de Bono)



Target
and
Task



Expand
and
Explore



Contract
and
Conclude

Agenda

1:00-2:30 Doing	<u>Framing case</u> : CLA pitch <u>Scanning case</u> : Dow hunting platforms <u>Forecasting case</u> : Scenario Indicators <u>FuturesIreland: National Futures</u> <u>Visioning case</u> : APF case <u>Planning/Acting case</u> : integration process France – sud-Nivernais: regional
2:30–2:45 pm BREAK	
2:45–5:00 Reflecting: Case sharing	Success framework Cases: The contact, The pitch, How it unfolded Audience cases
5:00 ADJOURN	

Ireland At Another Turning Point

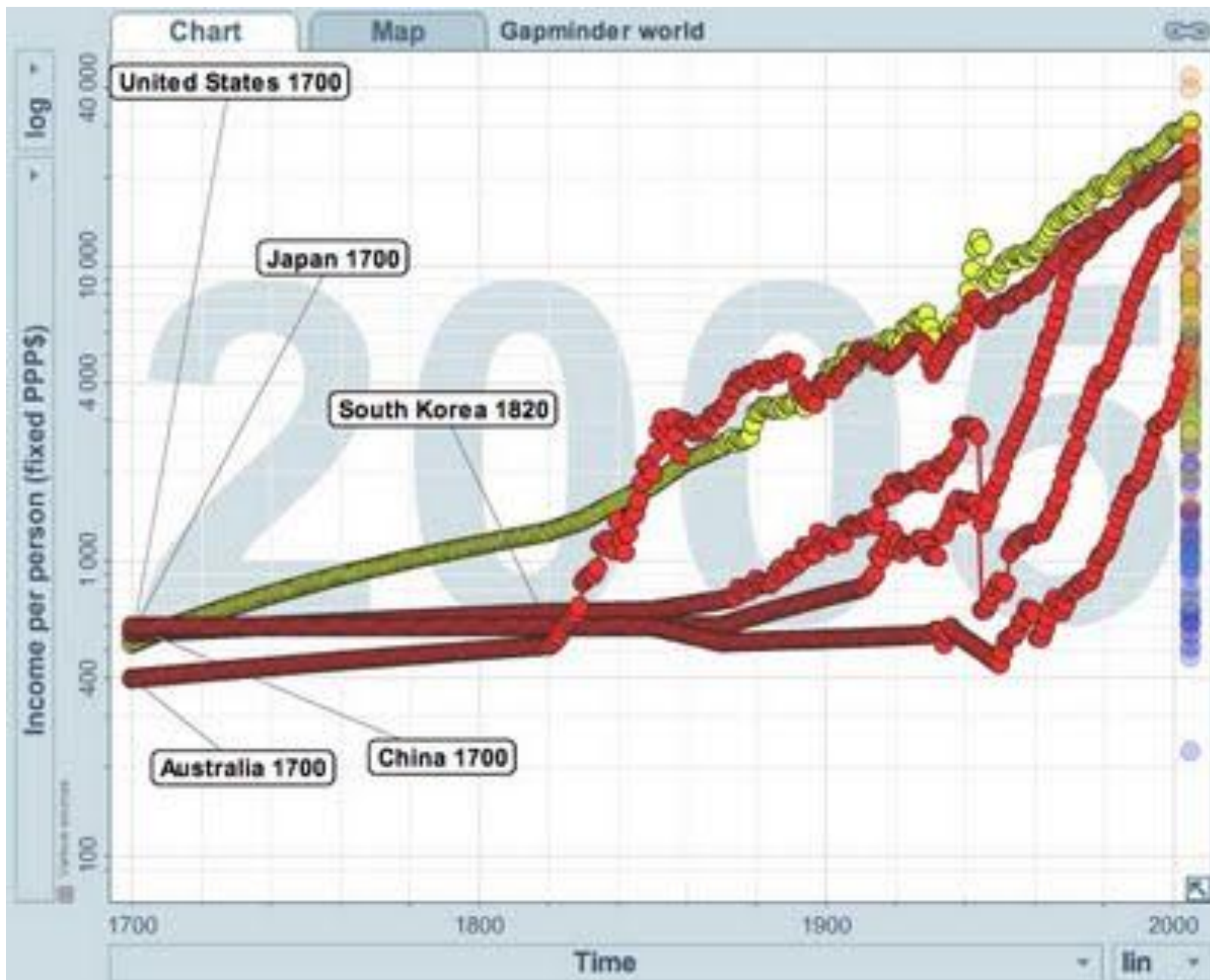
Reviving Development, Reforming Institutions
and Liberating Capabilities

The central argument of this report is that Irish people—in business, society and public service—are ready for much greater innovation, more widespread learning and richer accountability; but the capabilities and practices that support these are inhibited by some features of our organisational system. This argument has significant implications for how we address the current acute crisis and how we lay the



FuturesIreland

Convergence: Catch-up with the leader



Leap-frog: From behind to being ahead

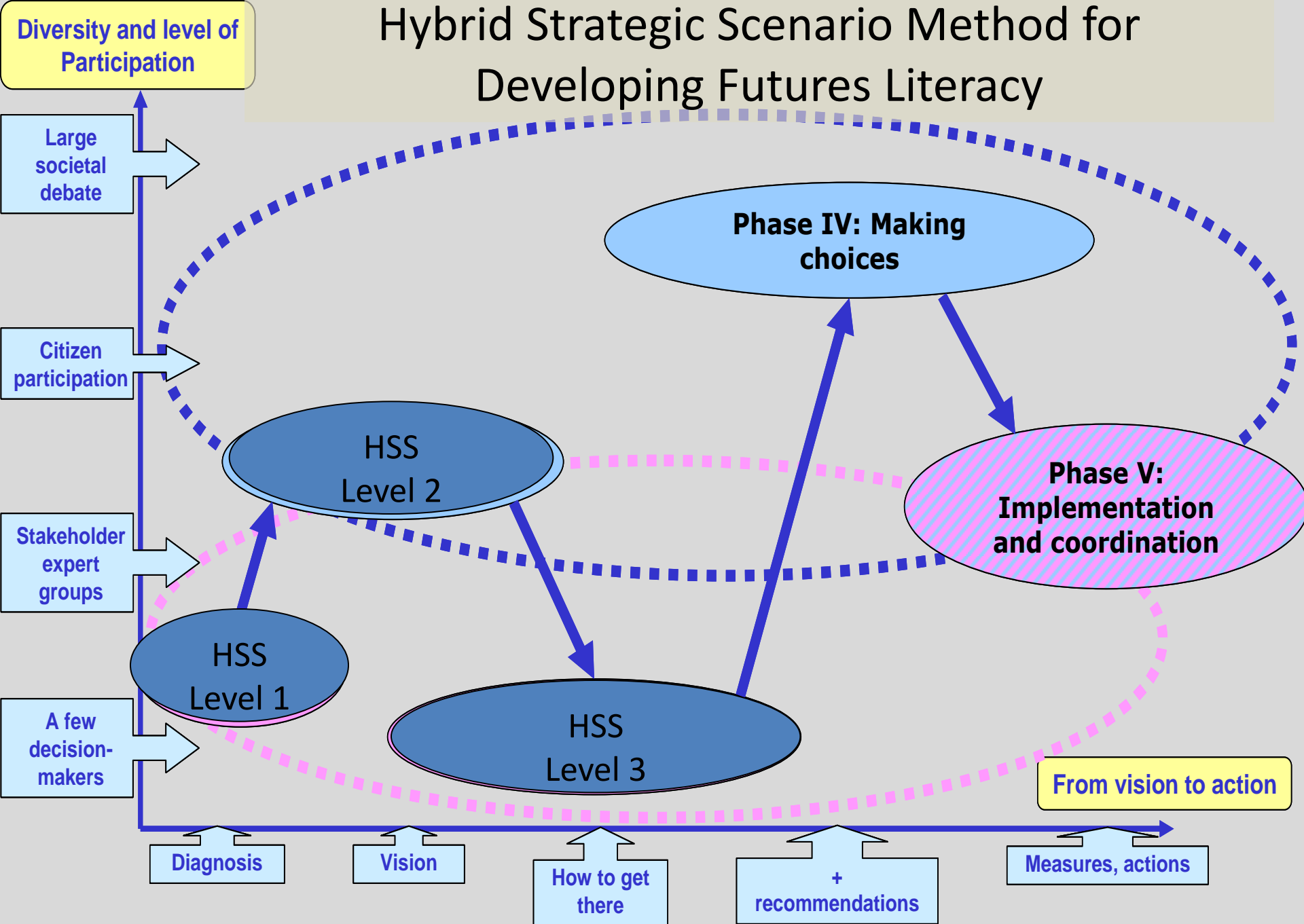


Leap-frog to where?

FuturesIreland HSS

- Two groups engaged in 3 Level process
 - Advisory Committee and Consultative Panel – each went through phases
- Expert Panel contributed to development of rigorous imagining frameworks – helped develop and encourage Level 2 reframing
- Process as product and seeds of a paradigm change – a strategic choice

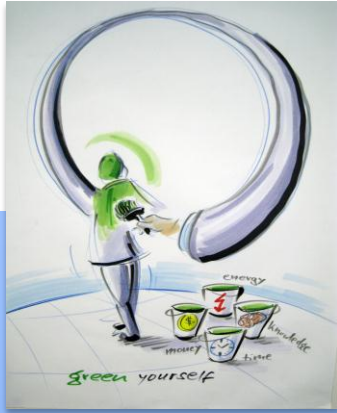
Hybrid Strategic Scenario Method for Developing Futures Literacy



Futures Ireland Three Levels of

FI

Consultative Panel 1



- Innovation
- Experiences

Consultative Panel 2



- 2030
- Thinking of a specific community

Consultative Panel 3



- Working with disruptive change

Sense Making Framework

	Social Integration and Creation	Public Governance	Business/W ealth Creation
Institutional			
Inter- personal			
Intra- personal			

↓ cliquez sur les noms

Agglomération de Nevers

Communautés de communes

Les Amognes

Des Bertranges à la Nièvre

Le Bon Pays

Entre Loire et Forêt

Entre Loire et Morvan

Fil de Loire


Loire et Allier

Nivernais Bourbonnais

Sologne Bourbonnais-Nivernais

Sud Nivernais

Communes isolées

Patrimoine 
 actualité
 du Pays
 Nevers
 Sud
 Nivernais



Commissions thématiques



Tourisme le mercredi 9 mars à 14h30 (Saint Léger des Vignes) et Services à la Population le jeudi 17 mars à 14h30 (Marault) sont les deux prochaines (...)

[lire la suite...](#)

Actions publiques territor



Le Conseil général met en place une démarche active et partenariale à vocation économique. Outre la mise en place d'un nouveau schéma, la collectivité (...)

[lire la suite...](#)

Saveurs du Sud Nivernais



La valorisation des produits locaux sur le Pays s'enrichit d'un logo "SAVEURS du SUD NIVERNAIS" et d'un futur espace de vente collectif - Coulanges (...)

[lire la suite...](#)

Prévention du vieillissement



Le Pays a souhaité développer un volet territorial, prolongeant les missions, de l'association CLIC, fixées par le Conseil Général, en soutenant (...)

[lire la suite...](#)


Vœux 2011

 Les élus du



Maison de santé

 Une visite de la




Agents de développement

 La prochaine



Comité d'engagement

 Chaque 3ème jeudi



SudNivernais Three Levels of

FI

Session 1



- Workshop with Innovators
- Four sectors

Session 2



- Level 1 & 2 Workshop with Elected Officials

Session 3



- Level 3 Workshop with Elected Officials

Permanent Secretariat from two local “regional development” offices reporting to a large and representative regional development committee

Level 1 Futures Literacy

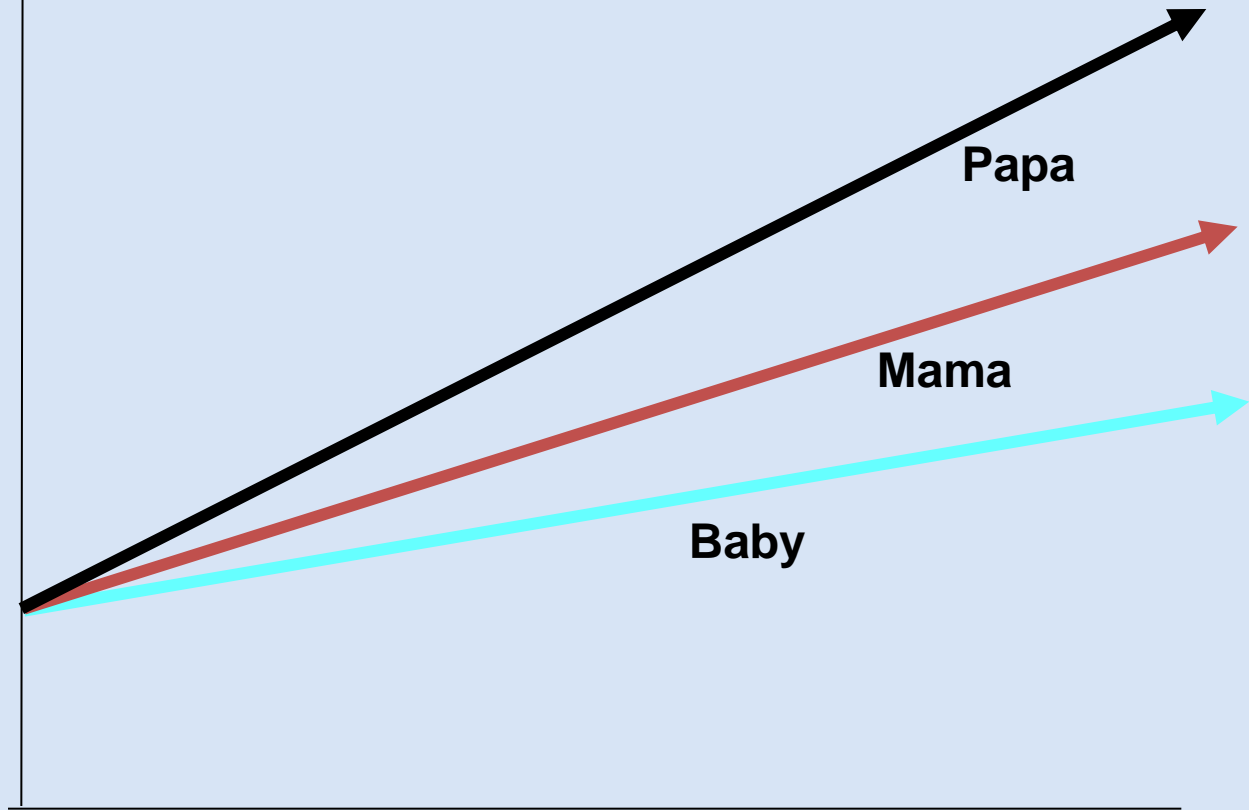
Temporal awareness,
values, expectations

Bear Scenarios: Papa, Mama and Baby




Demographics

Population



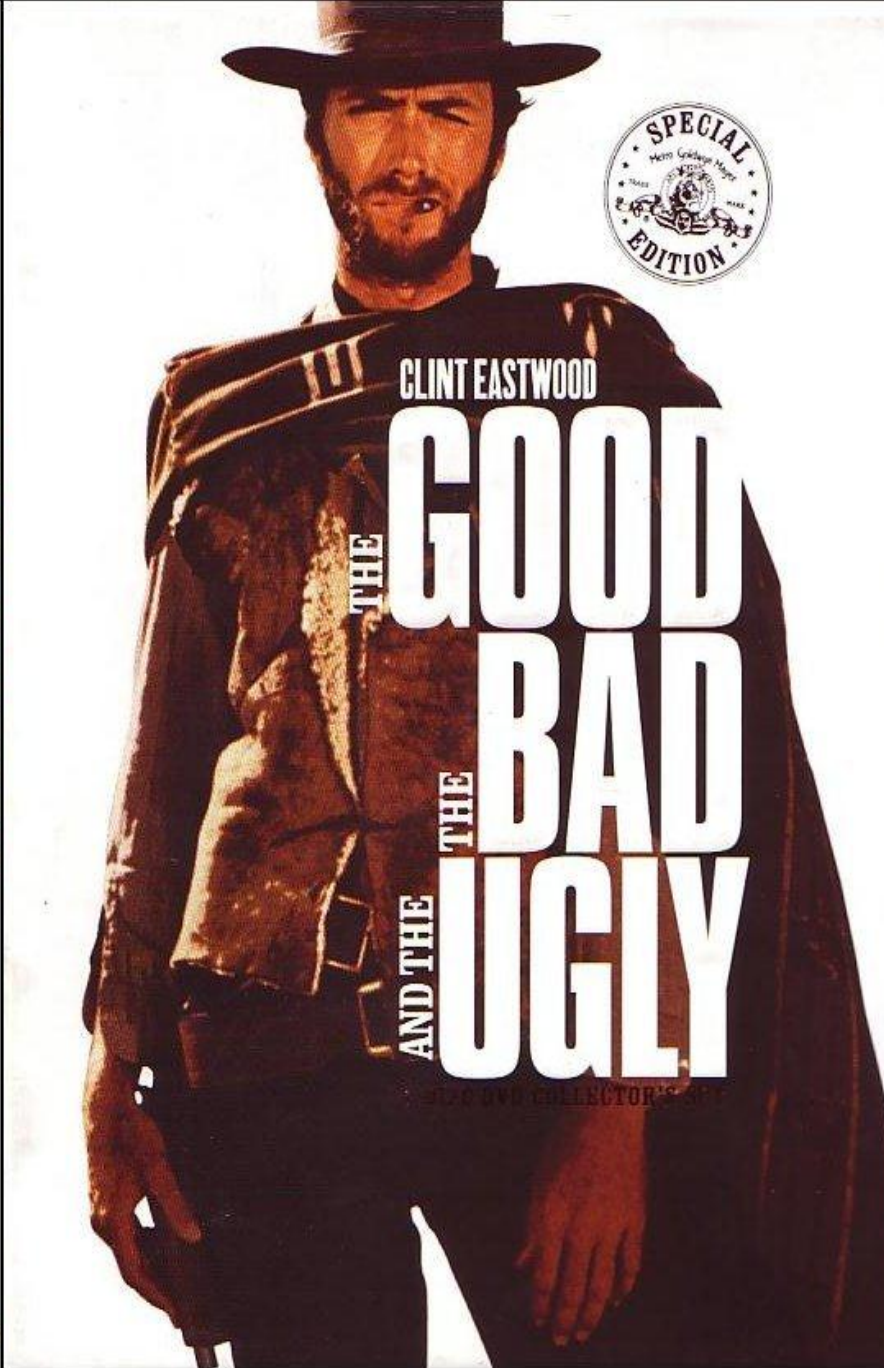
Time




SPECIAL EDITION

THE **GOOD**
THE **BAD**
AND THE **UGLY**

© 1980 DVD COLLECTOR'S CLUB



The Good, The Bad & The Ugly

Global Warming:	New Agreement (good)	No agreements (bad)	Muddle through (ugly)
Scenarios	Human impact on climate change reduced	Massive climate disruption	Moderate human induced disruption of climate

Build composite scenarios combining trends & preferences

	The Good, The Bad and The Ugly		
Bear Scenarios	Knowledge Driven	Commercially Driven	Mixed Model
Low rate of tech change			
Low enrollement growth	<i>Scenario 1</i>	<i>Scenario 2</i>	<i>Scenario 3</i>
Medium enrollment growth	<i>Scenario 4</i>	<i>Scenario 5</i>	<i>Scenario 6</i>
High Enrollment growth	<i>Scenario 7</i>	<i>Scenario 8</i>	<i>Scenario 9</i>
High rate of tech change			
Low enrollement growth	<i>Scenario 10</i>	<i>Scenario 11</i>	<i>Scenario 12</i>
Medium enrollment growth	<i>Scenario 13</i>	<i>Scenario 14</i>	<i>Scenario 15</i>
High Enrollment growth	<i>Scenario 16</i>	<i>Scenario 17</i>	<i>Scenario 18</i>

Level 2 Futures Literacy

- a) Rigorous imagining
- b) Telling good stories
- c) Distinct operational stories within the frames

A. Models for Rigorous

Imagining?

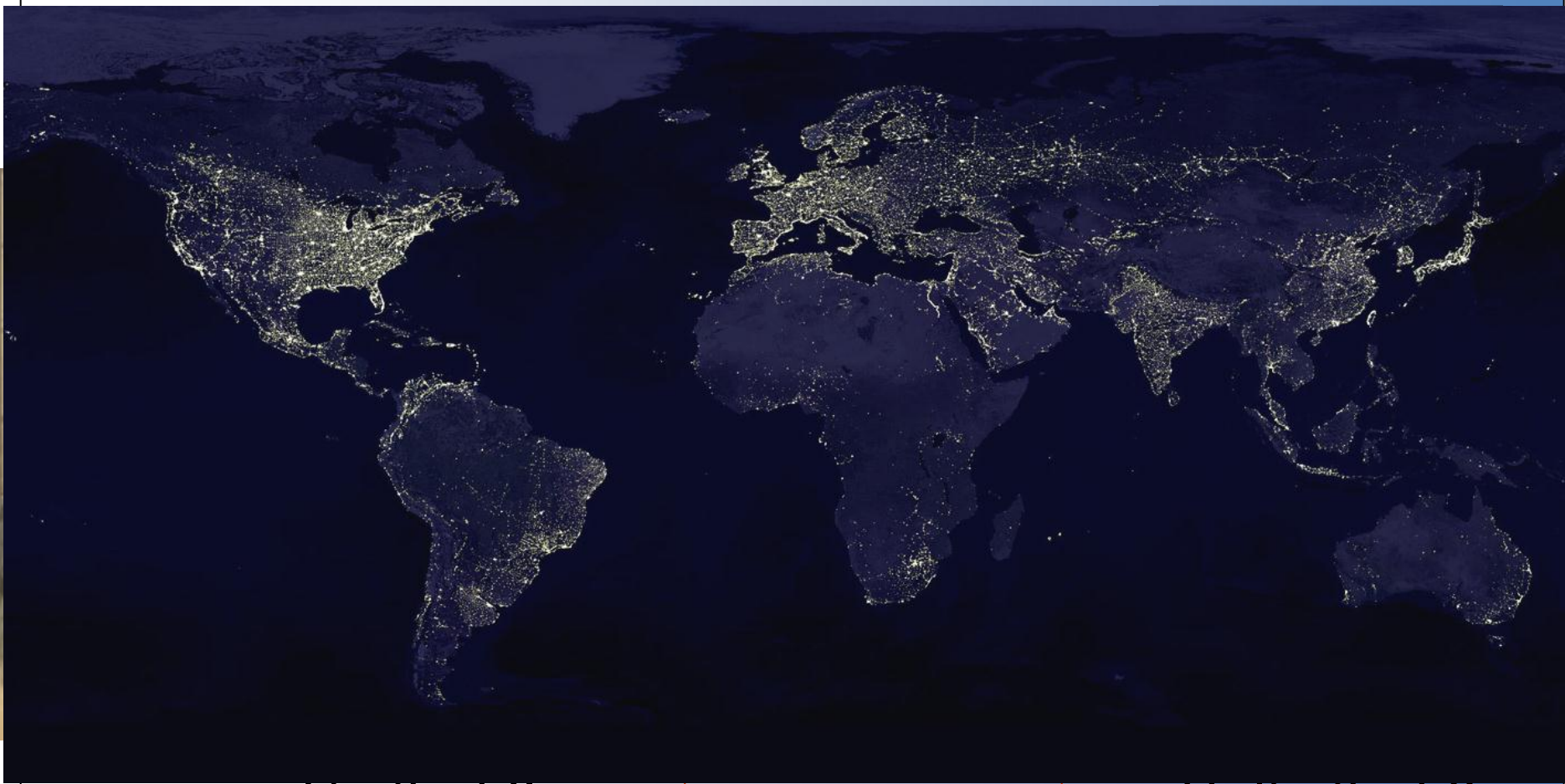
Select:

- Specific topic
- Theory (social science) underlying attributes
- Variables (metrics) underlying attributes

An example:

- Specific topic: electricity
- Dimension of change: pervasiveness
- Model variable space of pervasiveness:
 - a) ease-of-use
 - b) range-of-uses

An Example of an Analytical Frame



Limited &
homogeneous

Range of
uses

Unlimited &
heterogeneous

Rich Analytical Stories of Imaginary Futures

B. Telling good stories – five narrative criteria for framing scenarios

1. Purpose/genre
2. Point-of-view
3. Temporal-chronological frame
4. Protagonists
5. Causal rules – the “physics of the situation”

1. What is the type or purpose of the story?

Not tragedy or comedy, thriller or romance;
but basic types:

- contingency planning/simulation training
- optimisation testing
- discovery - exploration -imagining

2. What is the point-of-view?

Not first or third person, stream-of-consciousness or dialogue; but is the story told in terms of:

- the choices people make in their everyday lives (micro) or
- aggregate outcomes (macro) – or
- both explicit relationship between micro & macro

3. What is the temporal or chronological frame?

Not beginning, middle and end; but

- comparative static (two or more cross-sections) or
- dynamic/path (time-series) or
- backcasting (reverse engineered)

4. Who are the main protagonists?

Not hero and villain; but who makes the decisions

- a specific institution (sub-unit) or
- a social/economic system (nation, sector, etc.)
or
- institutions nested within a dynamic socio/economic context - interaction

5. What rules apply to the action?

Not is time travel allowed or Matrix like suspension of the rules of physics; but what are the assumptions that provide the analytical definitions and causal relationships that make for robust social science.

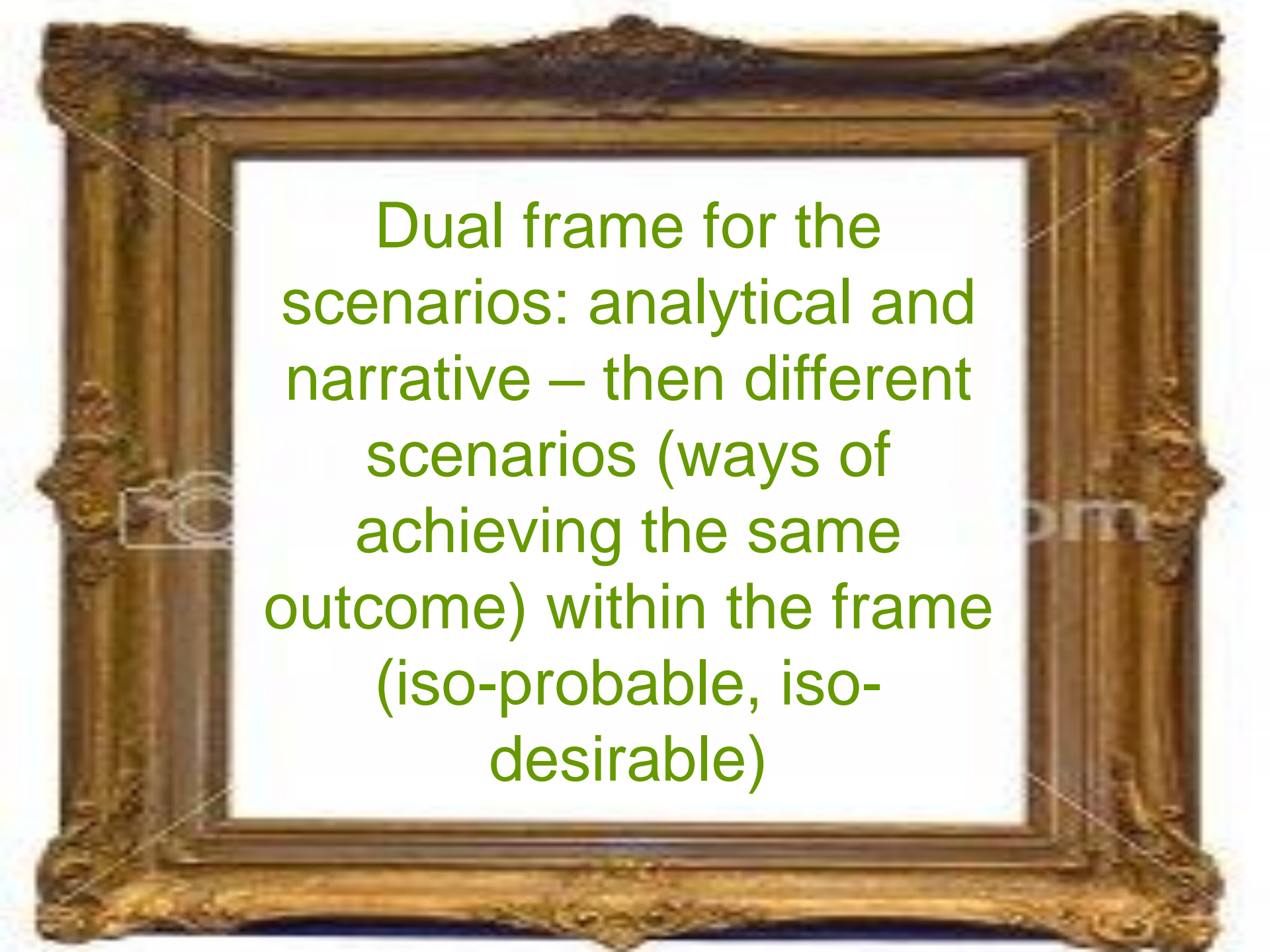
C. Six Electrification Scenarios

	Centralised	Decentralised
Only as a Weapon	Scenario 1	Scenario 2
Industrial Power	Scenario 3	Scenario 4
Consumer Power	Scenario 5	Scenario 6

Constrain the form and function scenarios

Using the possibility space variables and the general form/function framework to focus on imagining functional – day-in-the-life alternatives based on distinct forms and function outcome scenarios – these scenarios will differ on the basis of :

- Distinct values
- Distinct organisational options



Dual frame for the scenarios: analytical and narrative – then different scenarios (ways of achieving the same outcome) within the frame (iso-probable, iso-desirable)







Stories
within the
frames

Level 3 Futures Literacy

Strategic scenarios

- Using the contrast between imagined futures and the present assumptions:
- Clarify systemic boundaries and identify changes in the conditions of change
- Reintroduce values and expectations
- Focus on the assumptions and how choices might make a difference (defensive, neutral, transformative)

Thinking about systemic change?

**Change within
the system**

**Change outside
the system**

Inside-in

Inside-out

Outside-in

Outside-out

How we anticipate matters, it
changes the present, help
people to use the future
more effectively



Thank you
Riel Miller