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## **Complex Systems**

Brussels, Nov. 9 2010  
Bertrand Braunschweig

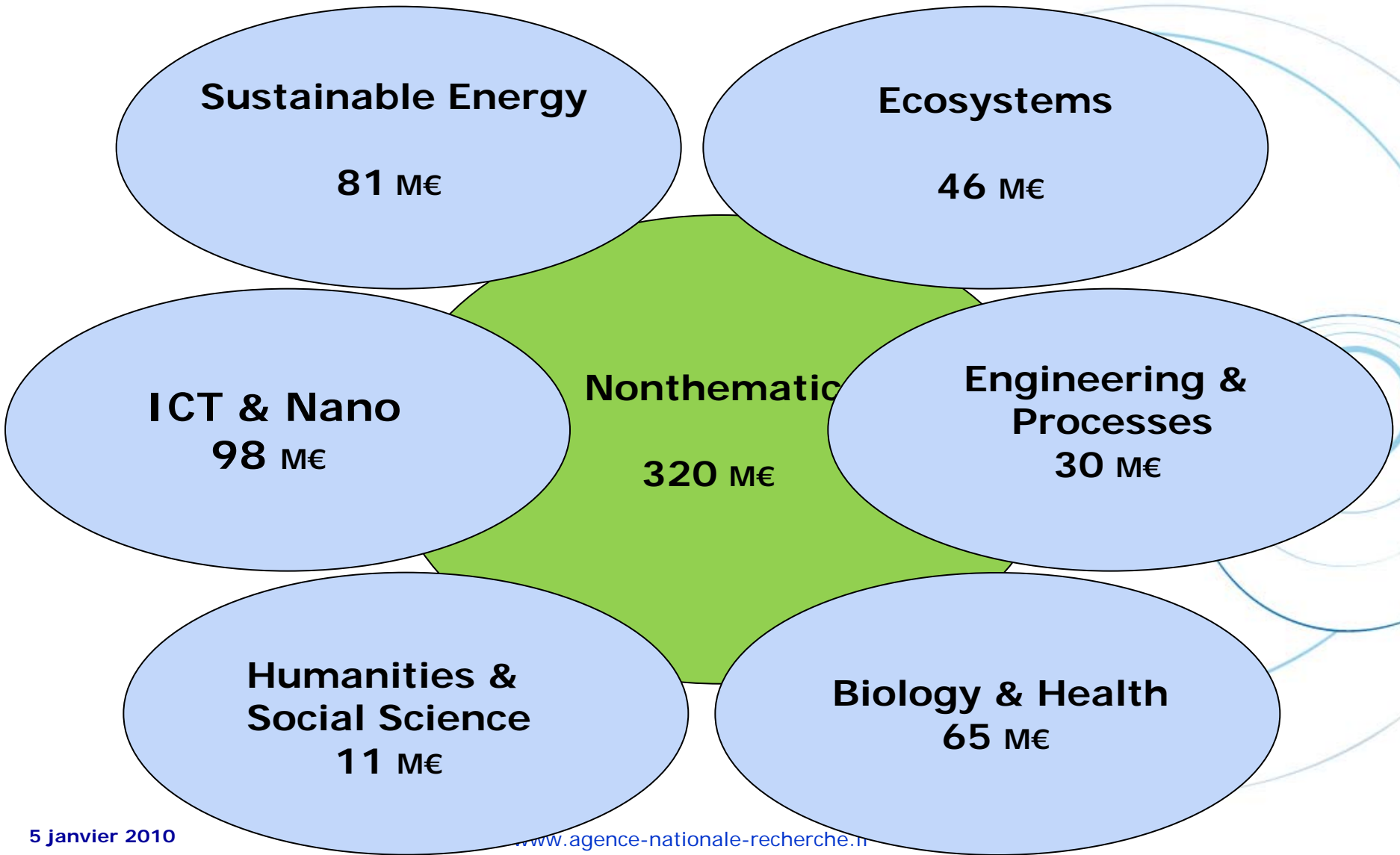


# ANR's main statistics

- Budget:
  - Approx 800M€ p.y.
- Instruments :
  - 55-60 annual calls for proposals
- Evaluation by peers
  - 6,000 projects submitted p.y.
  - 1,300 projects funded p.y
  - Average success rate 22% in 2009
- Average funding:
  - Academic projects : 400.000 €
  - Public/private projects 870.000 €



# Programmes 2010



# Complex systems in ANR

- From 2005, projects in various programmes e.g.:
  - Non thematic
  - Systems biology
  - Some ICT (massive data, security, HPC, networks ...) and other departments
- «SYSCOMM» programme 2008 – 2009
  - « complex systems & mathematical modelling »
  - Modelling + experimentation + some computing
- Non-thematic programme 2010 -
- « Design & Simulation » programme 2008-2010

# SYSCOMM Programme 2008

## 7,2M€funding

Theme	# Submitted	# Funded
Biology Health	36	8
Ecology & Agri	7	1
Earth & Astro sciences	13	1
Engineering	19	5
Social dynamics	7	4
<b>Total</b>	<b>83</b>	<b>19</b>

# SYSCOMM Programme 2009

## 6,3 M€funding

Theme	# Submitted	# Funded
Biology Health	22	2
Ecology & Agri	9	2
Earth & Astro sciences	10	2
Engineering	22	7
Social dynamics	8	2
<b>Total</b>	<b>71</b>	<b>15</b>

# Example 1: Webfluence CREA-UPMC-Linkfluence-Orange

ANR SYSCOMM : janvier 2009 → décembre 2010

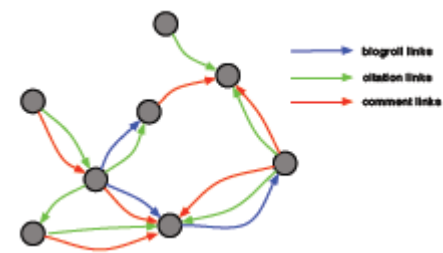
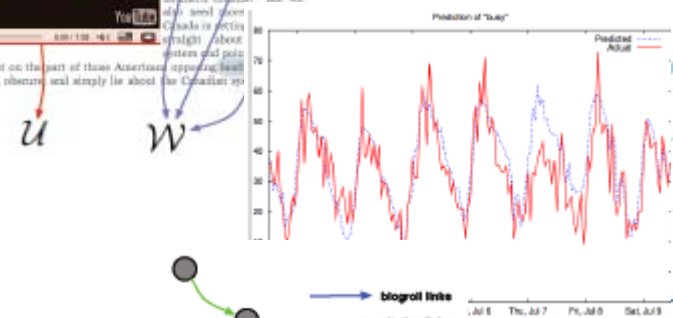
*"Dynamiques d'opinion dans des espaces publics numériques  
Topologie, morphogenèse et diffusion"*

**Contexte : La blogosphère comme système observable in vivo**

- un système complexe socio-sémantique
- à dynamique fine, rapide, et à grande échelle
- à dynamique multi-réseaux
- porteur d'applications industrielles
- porteur d'enjeux sociétaux, lié au "social computing" et à la "social science 2.0"

Setting the Record Straight: More from our Canadian Cousins  
Written by Robert Austin Laidlaw on August 23rd, 2009

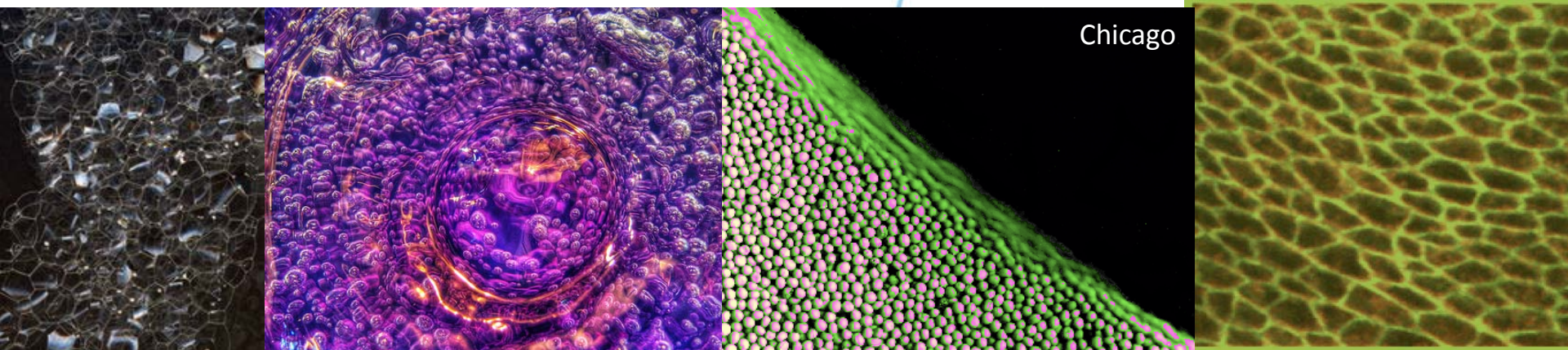
Listen to some more. Finally, Canadians are fighting the slavishness characteristics of the Canadian health care system by U.S. insurance companies and other ideologues. As stated, medical care is a luxury right, not an economic product to be overvalued simply because of the further line. We, Americans, would do well to have the notion of cost-neutral systems. But we also need more Canada is a victim system that puts straight about system at pain. Americans opposing health efforts to distort, obstruct and simply lie about the Canadian system for more.



## Example 2: Maniphyc

Univ Lyon, Univ Bordeaux, Rhodia, INRIA, Univ Savoie

**A concerted Maths-Numerics-Physics approach to achieve a multiscale understanding of the flow of disordered materials**



How do these solid materials flow under constraints ?  
(multiscale dynamics, far from equilibrium, ...)



chist-era

# CHIST-ERA ERANET



Long-term transformative research in **challenging multidisciplinary research in the area of Information Communication Science and Technologies with potential high impact**



Der Wissenschafts fonds.



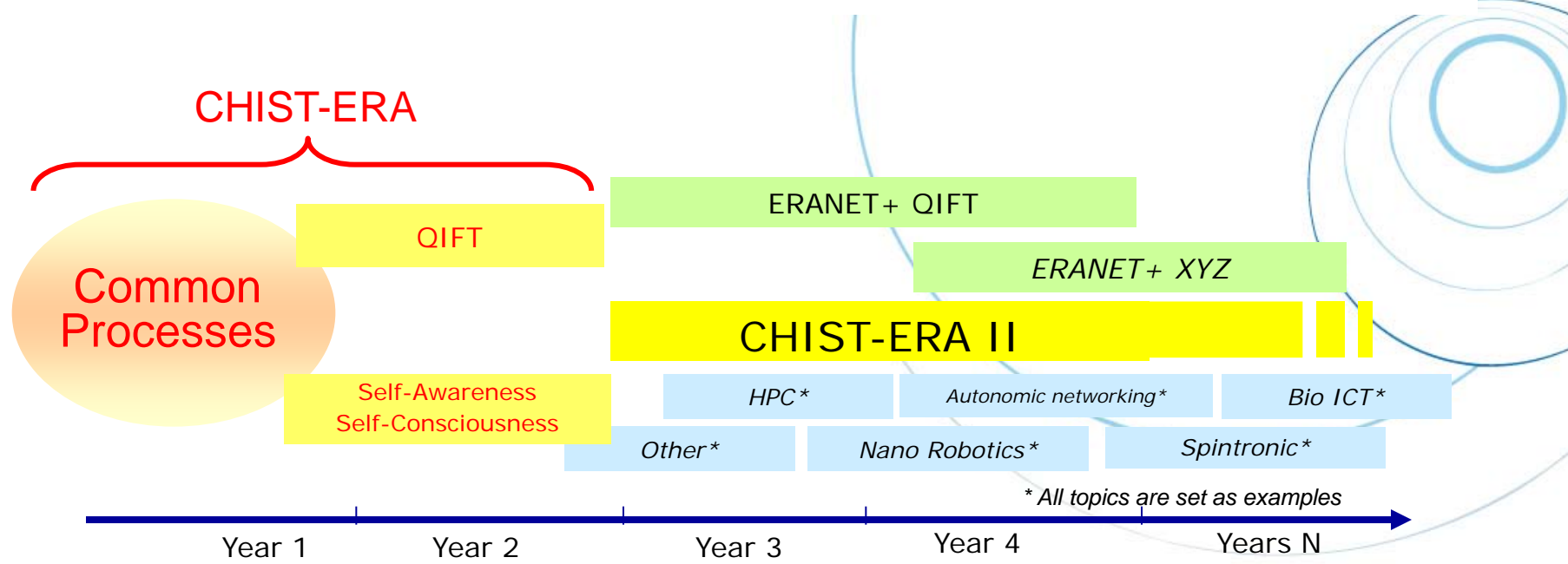
And open to new members!



# CHIST-ERA Long term Vision

## Common backbone for the funding agencies

- Exchange of best practices for selection, programming, follow-up
- Exchange of strategic objectives and build common vision
- Definition of common evaluation, selection, implementation process
- Launch common call for proposals
- Projects follow up after funding





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