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Asian Perspectives Global Issues

Steering through Unknown Unknowns

Traversing the Complexities of a New World

Khazanah Megatrends Forum 2012

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Andrew Sheng,
President,
Fung Global Institute

Key Points

1. Why did we not see the Great Recession coming?
2. Lulled by Neoclassical Economic Paradigm of “Perfect Systems that revert to Equilibrium”
3. The real world is full of UNKNOWN UNKNOWNs, inc. destabilizing behavioral responses and natural disasters, leading to Disaster Myopia and Collective Action Traps.
4. Decision-making under Complex, Non-Linear conditions requires new response: Search, Share, Experiment, Learn, Experience, Innovate, Adapt, Evolve
5. Survival under Complexity requires Social Organization and Adaptation.
6. This requires a New Web of Social Contracts.

How Global Watchdogs Missed A World of Trouble — *Paul Blustein, CIGI Paper No. 5, July 2012.*

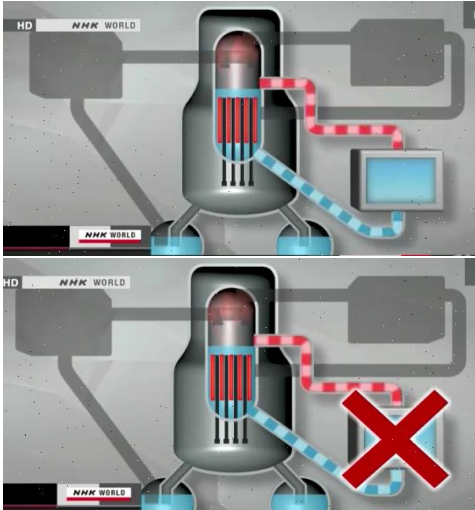
- Financial Stability Forum (FSF) was created in 1999 to coordinate efforts in preventing and mitigating financial crises.
- Study showed failure of regulators to keep pace with globalization of financial system
- FSF was slow in discerning system fragility and directing preventive and preparatory action. Sluggish in grasping severity of crisis at outset
- US officials exhibited hubris in dealing with FSF and stymied initiatives that may have affected Washington's own policies and practices.

Disaster Myopia – who would have thought?

- Einstein - “The problems that exist in the world today cannot be solved by the level of thinking that created them”.
- A US subprime crisis could broaden into a Global and European sovereign-debt (and banking) crisis?
- Immolation of a jobless Tunisian graduate in 2010 could spark off the Arab Spring?
- All three safety systems in the Fukushima plant would fail in the 2011 Japan’s earthquake?

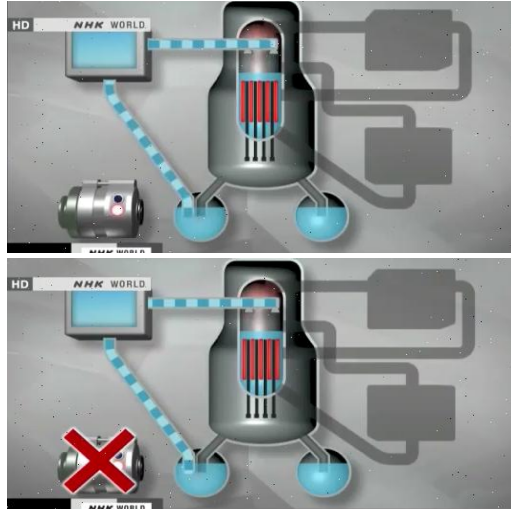
'Beyond Expectations' – All three safety systems failed!

First safety system failed.



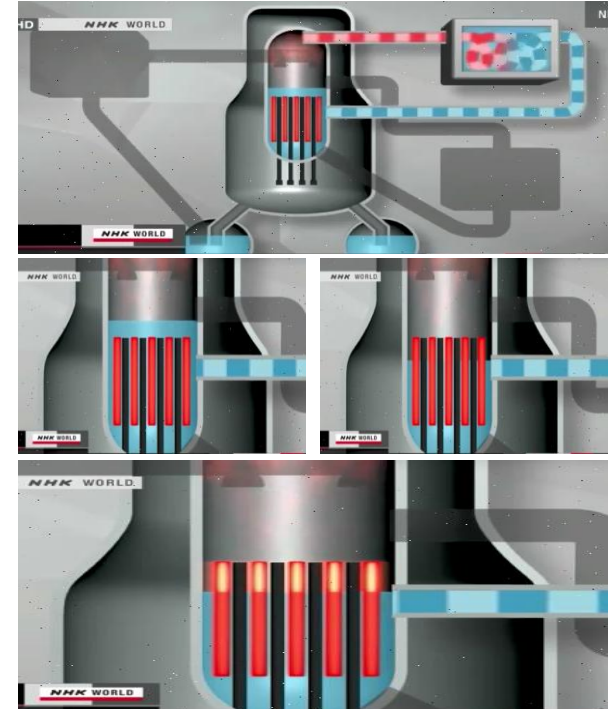
- Fuel rods were still hot
- Water should have been circulated to cool them down. But this did not happen because of a **power outage right after the quake**

Second safety system failed.



- 2nd safety system turned on
- **Emergency diesel powered generator began spraying the rods with coolant**
- But one hour **later something unexpected happened**: emergency generator stopped without warning + a 10-meter high tsunami hit the power plant. This could have caused the generator to fail

Third safety system failed.



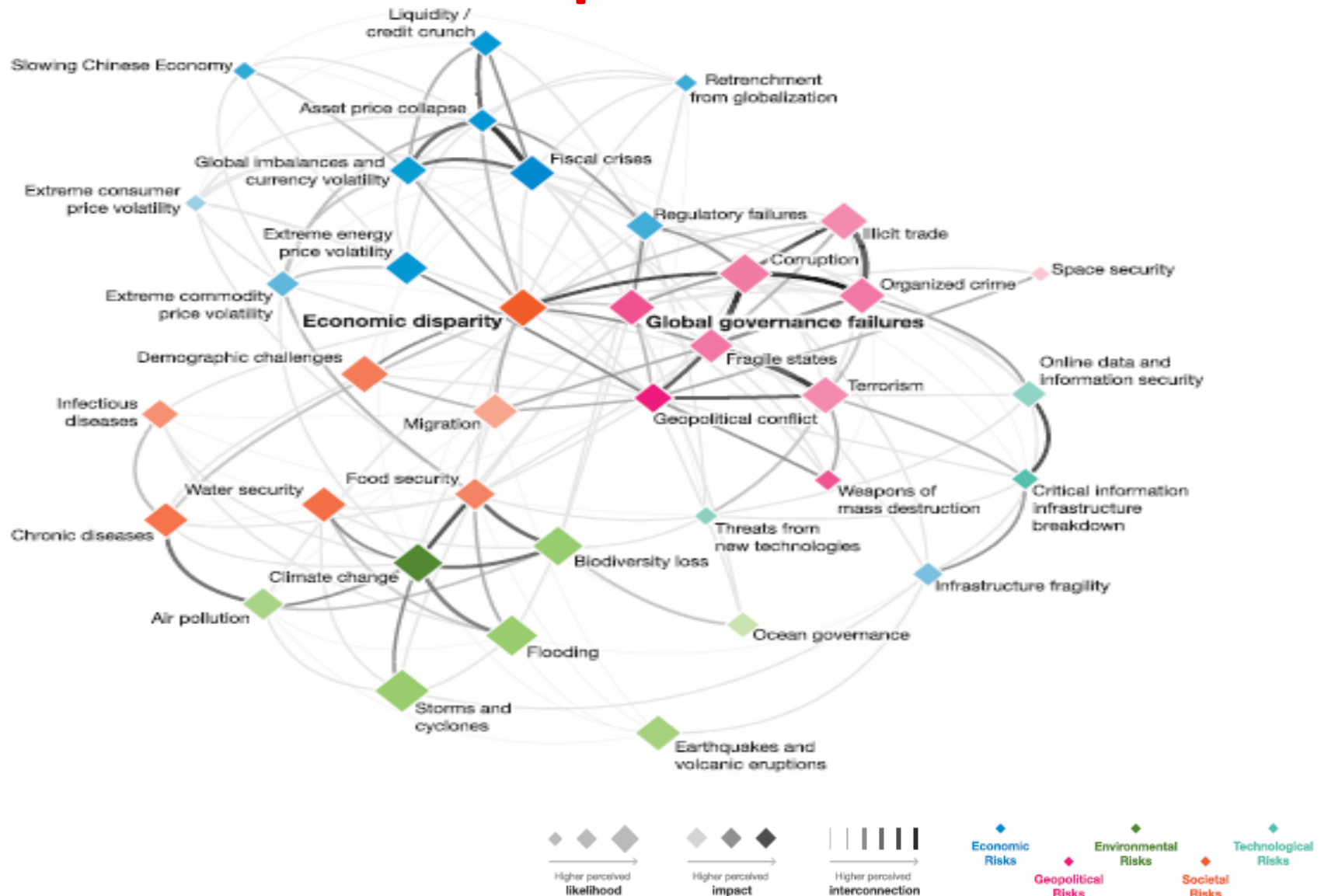
- 3rd safety system started operating
- **It converts steam travelling through the pipes into water**
- It cools the rods but water level went down and temperature continued to rise

Source: CNN.

Multi-dimensional complex, simultaneous transformation: -

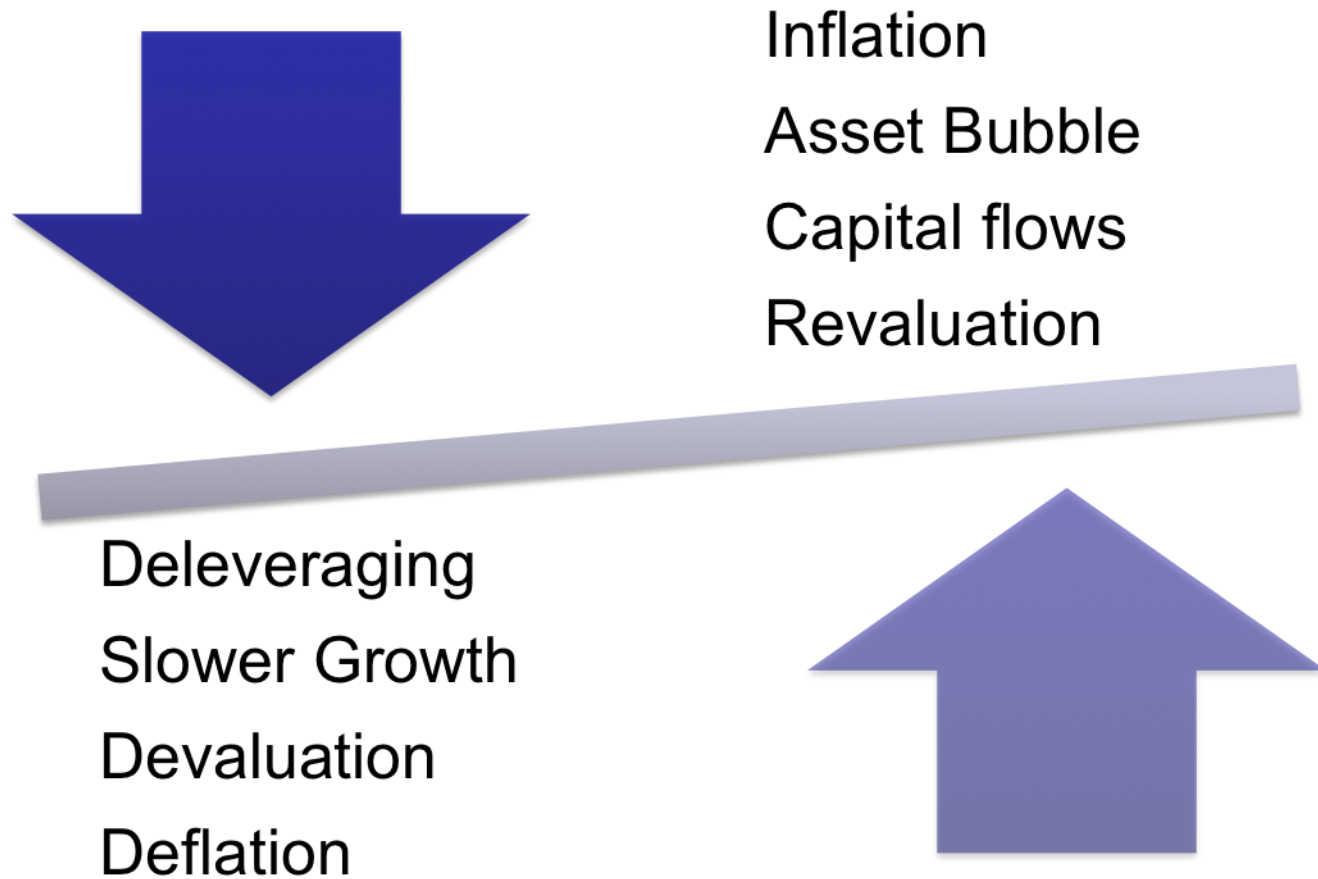
- **Demographics** – rising to 9 billion in two decades
- **Urbanization** – more than 50% live in Cities
- **Industrial transformation** – from Waste to Green; from Products to Services
- **Technology** – Social Media
- **Climate change** – Carbon warming
- **Terrorism/Human Conflicts** and
- **Natural disasters.**

We are in a complex web of risks ...



Source: World Economic Forum.

Re-balancing: Deficit countries vs. Surplus countries



Capital Flows to rise to US\$825 Billion in 2010 - IIF

RETHINKING NEEDED

Behavioral Bias towards Status Quo – Beinhocker (2007, p.374)

- *Individual* – Optimism dulls Recognition for change
- *Organization* – Loss aversion favours “do more what we are familiar with”
- *System structure* – “Silos” are difficult to coordinate to meet environmental change – collective action traps
- *Closed culture* tends to blame outsiders for problems and unwilling to accept that environment has changed.

Making Sense in Complex World

- Simple theory cannot explain complex change.
- Current events are phases of systemic changes of **systems interacting within systems** in new, multipolar global system.
- Need rethink economic and political theory to address growing inequality, rising unemployment, financial disarray and climate change.
- Cannot examine our markets in isolation. Asian markets are inextricably tied to Western economies through complex, dynamic feedback mechanisms, viz, supply chains, financial and social networks.
- We need a **system-wide framework** to chart these massive changes and to manage the evolving complexity.

System-wide problems can't be solved partially - Frithof Capra, systems-thinker

- We are living in systems within systems. A system is more than sum of its parts, which exhibit adaptive, dynamic, goal-seeking, self-preserving, self-organising and evolutionary behaviour.
- We need a systemic and systematic way of thinking and acting based on the interactive and interconnected way the world evolves.
- “Development process is not purely an economic process. It is also a social, ecological, and ethical process, a multidimensional and systemic process.”

Thinking Creatively

Michael Gelb, Rotman 2011

- Look at your own perspective
- Look at alternative perspective
- Find a third alternative perspective
 - Thrive in face of ambiguity
 - Be a systems thinker
 - Deductive thinking - reductionist
 - Inductive thinking – from facts to reason
 - **Abductive thinking – what might be?**

Over-active policy does not compensate for Lack of Knowledge

Andrew G Haldane, Bank of England, August 2012.

- Keynes, Hayek, Simon, Friedman all emphasized imperfections in information and knowledge.
- Hayek's 1974 Nobel address, "The Pretence of Knowledge" laid bare perils of over-active policy assuming omniscience, when we don't know enough.
- Physicist Richard Feynman:
- "It is not what we know, but what we do not know which we must always address, to avoid major failures, catastrophes and panics."

Adding Complexity: From Basel I to Basel III

- Basel 1 (30 pages) → Basel 2 (347 pages) → Basel 3 (616 pages)
- Glass-Steagall (37 pages) – Volcker Rule (325 pages); Dodd-Frank (1,100 pages, including rules \cong 30,000 pages)
- In financial regulation, is more more or is more less?
- Over-regulation or Under-Enforcement of Simple Principles?
- Should Asians take medicine for which we do not yet have the disease?

Moving from Policies to Outcomes; Vision to Action

- Current Paradigm is more (Top-Down)
- focused on Policy and Vision, rather than Outcome and Action **Dealing with Complexity requires Shared Experience and Co-Creation/Co-Adaptation (Bottom-Up).**
- Ensuring policies and institutions are as adaptable as possible, People, Growth/Business Models, Planet must co-evolve Dynamically.
- Moving out of Collective Action Trap requires finding Leverage Points (shared values) – organic change.

Adaptation as a Mindset –

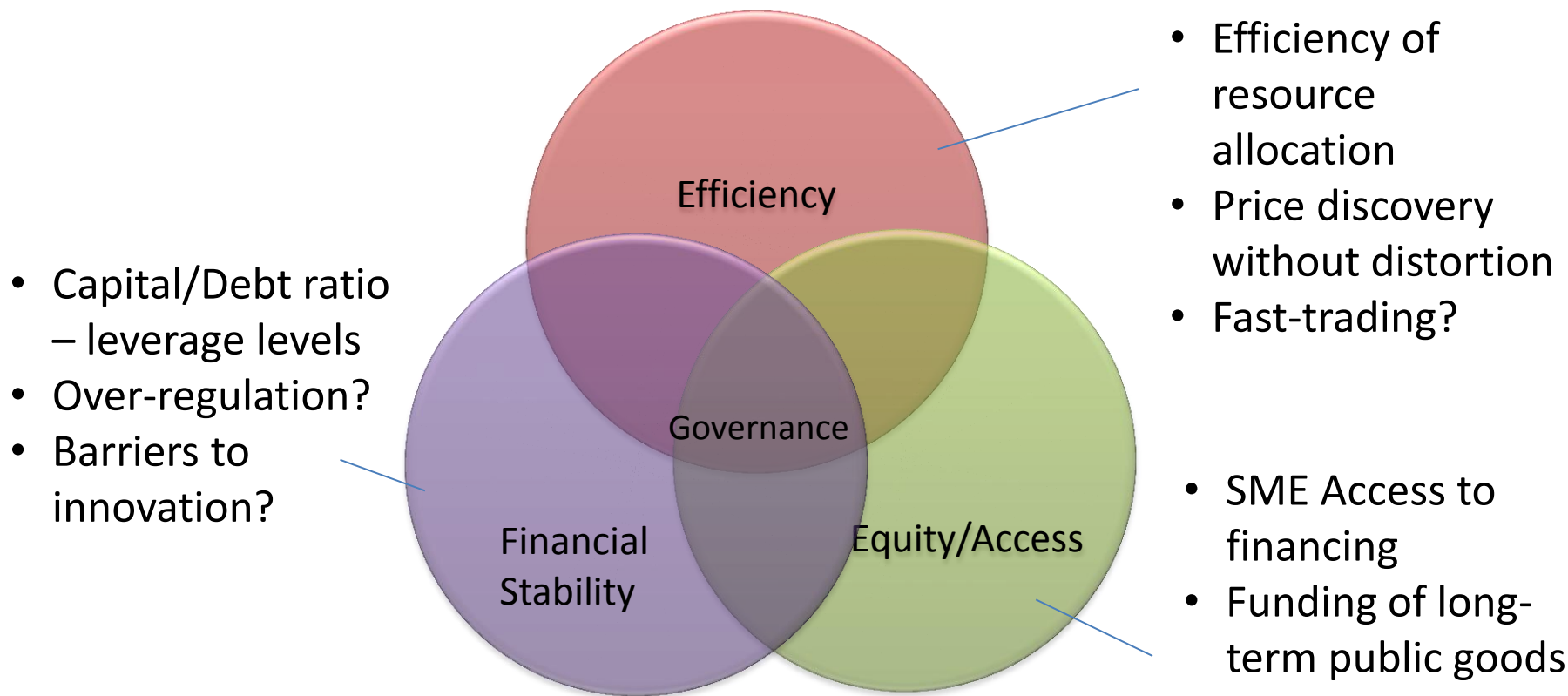
Heather Fraser – Rotman 2011

- **Openness**
- **Multi-Disciplinary Collaboration**
- **Understanding and Need-Finding**
- **Iterative Prototyping and Experimentation**
- **Systems Mapping**
- **Storytelling - visualization**
- **Co-creation, via abductive thinking, synthesis and intuition**

Cross the River by Feeling the Stones is not a Random Process

- **Strategize within uncertainty**
- **Prioritize within resources/risks**
- **Experiment by Piloting**
- **Search for new options**
- **Share Experience**
- **Adapt, Innovate through co-creation**
- **Exploit and Expand pilot**
- **Review and Move Forward**

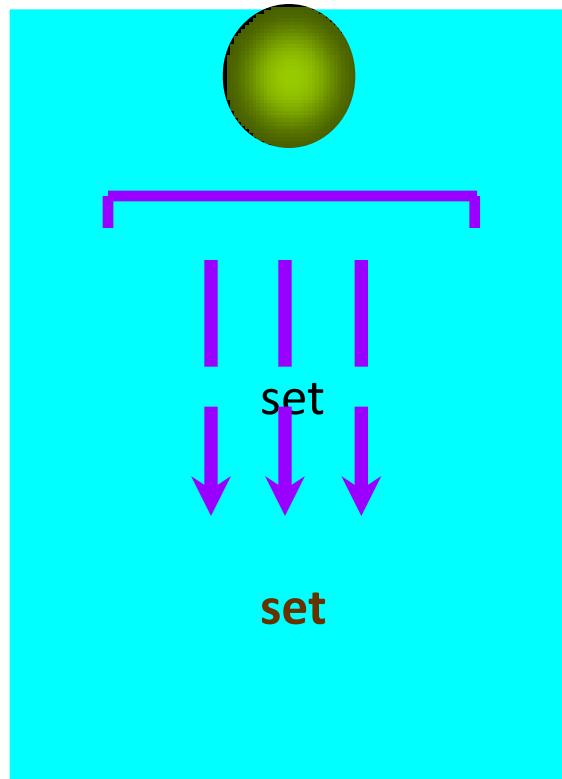
System Stability rests on Trade-offs of Growth Model



Macro-prudential concerns (stabiity) must be weighed against policy objectives of efficiency and equity

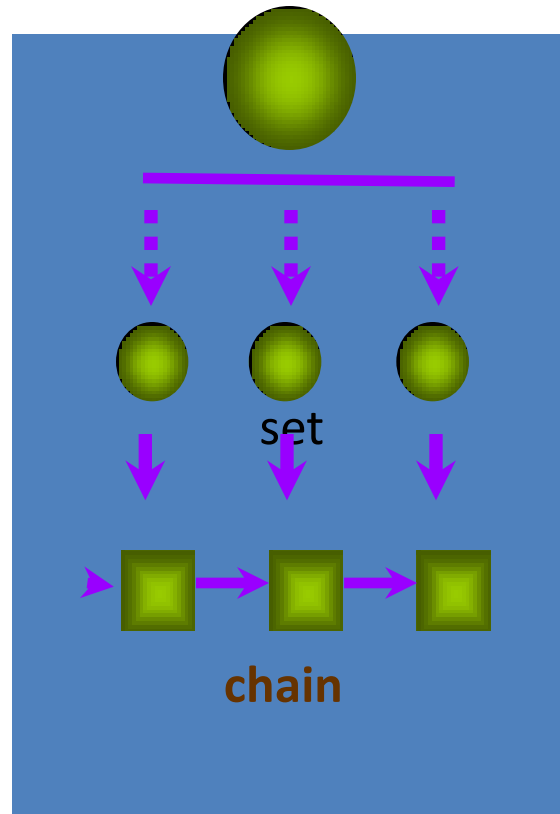
Current Top Down Management:

Divided by Silos and Resources Allocated from Top



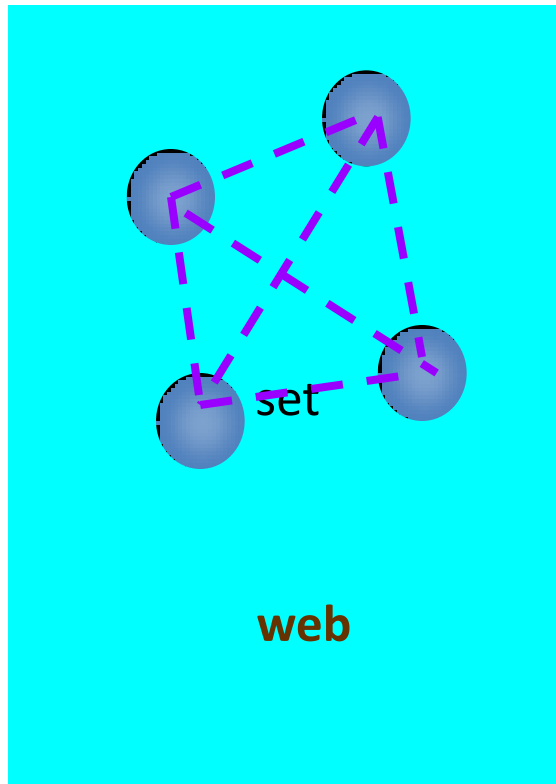
Managers look
to allocate and control

Biggest Challenge is Horizontal Coordination and Feedback from Bottom



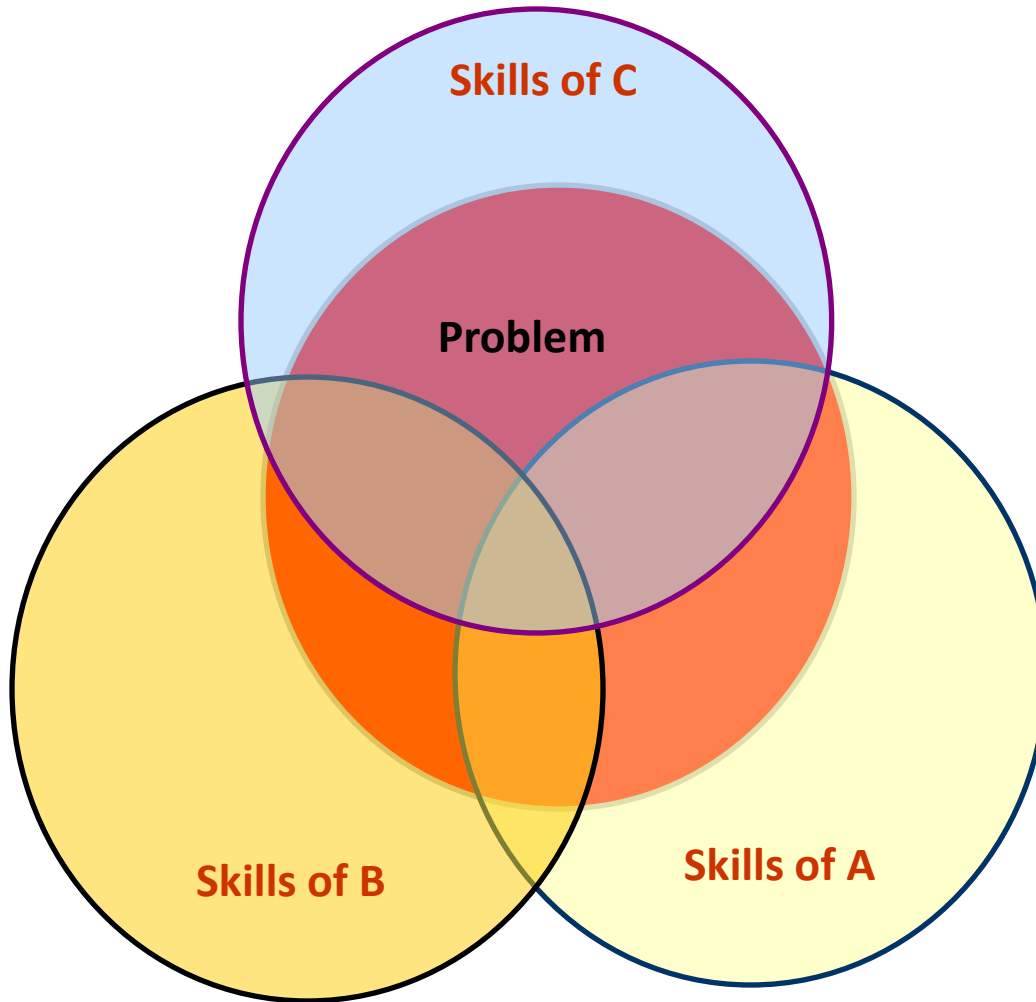
[Collective Action Trap because Silos refuse to cooperate)

Managing through Web Energizing structure



**In the web, managers link
it all, they energize.**

None of us is smarter than all of us



A, B or C do not have knowledge or skills to solve problem alone.

EF Schumacher: Five Principles for Large Organizations (Small is Beautiful, 1974)

All large organizations face conflicts between centralization (order) and decentralization (entrepreneurship/freedom)

1. **Principle of Subsidiary Function** – it is an injustice and at the same time a grave evil and disturbance of right order to assign to a greater and higher association what lesser and subordinate organization can do.
2. **Principle of Vindication** – Good government is always government by exception – except for exceptional cases, subsidiary unit must be defended against reproach and upheld.

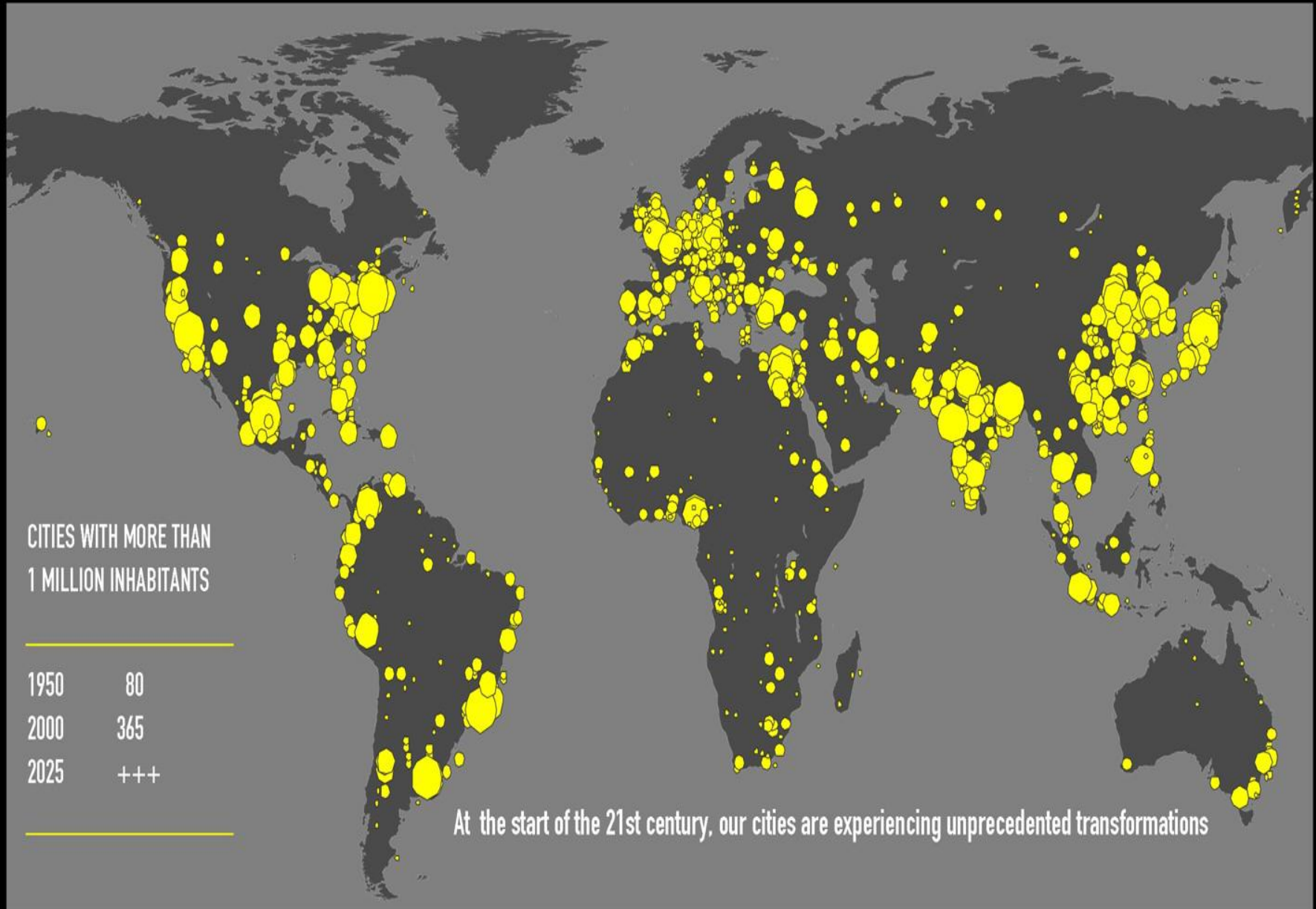
EF Schumacher: Five Principles for Large Organizations (Small is Beautiful, 1974)

3. **Principle of Identification** – each subsidiary must their own profit and loss account and balance sheet
4. **Principle of Motivation** – especially at the lower levels
5. **Principle of Middle Axiom** - all human problems stem from the antinomy of order and freedom – antinomy means a conflict between two laws – middle axiom is an order from above which is not quite an order.

Pilot and Build using Modules that can “cut off” from system failure. Competing Modules innovate and adapt.

Reactors and Actors in New Normal

- Nation-states are reacting to global trends, because of collective action trap – no powers to deal with cross-border issues
- Three actors have most freedom to act:
- *Cities* – Cities have to deal with local problems; both successful (Singapore) or failure (Lagos)
- *Corporations* – global in reach; not leveraged; highly innovative – Apple, Hyundai,
- *Civil Society* – Social Philanthropy making major changes [Gates, Rockefeller, Medicin San Frontiers)



Systems Thinking require Collective Action

- **Systems Thinking and Action** means that we learn *collectively* to deal with complexity, unpredictability, and reflexivity of real world.
- **Systems Sustainability** means we must have trade-offs between Efficiency, Social Justice and Environmental Sustainability – People, Planet and Profits.
- This requires very different way of working – recognizing that Social Media enables Social Sharing, Co-Creation, Risk-Sharing and Adaptation in a System Sustainable/Stable evolution.
- **Small is Beautiful** – we need a new web of social contracts.

THANK YOU



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