

Forum of X-Center Japan (FoXc-J)

- 1. Core Founding Members**
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- 3. Focal Operations**
- 4. Monthly Evening Forum**
- 5. Outcomes**

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Jyvaskyla University Tokyo Liaison Office (JUTLO)

xcenternetwork.com

Forum of X-Center Japan (FoXc-J) Office of the Secretariat







Forum of X-Center Japan (FoXc-J) **Focal Operations**

1. General Resilience Theory Maruyama, Minami
2. Urban Resilience Yamagata
3. Resilience in Supply Chain Management Matsukawa
4. Corporate Resilience Watanabe, Ibaragi, Zhao, Ouchi, Nishioka
5. Resilience in ICT Advancement Watanabe, Zhao, Ouchi
6. Resilience in Energy and Environment Systems Tokimatsu

Forum of X-Center Japan (FoXc-J)

Monthly Evening Forum



**Resilient
Business Model** based on the
Manners and Hospitality to
Make Customers Happy
- **Honor of Japan's Business** in a
Cross-cultural Communication

Forum of X-Center Japan (FoXc-J) **Monthly Evening Forum**

April Forum

Date: 11 (Mon) Apr. 2016 18:00-20:00

Theme: **Innovator's Dilemma in Japan**

Lecturer: Dr. Schumpeter Tamada

Professor, Institute of Business and Accounting, Kwansei Gakuin University

March Forum

Date: 8 (Tue) Mar. 2016 18:00-20:00

Theme: **Business Model based on the Manners and Hospitality to Make Customers Happy
- Honor of Japan's Business in a Cross-cultural Communication**

Lecturer: Ms Izumi Egami

Visiting Professor, University of Tsukuba, Director, Global Manner Springs

February Forum

Date: 17 (Wed) Feb. 2016 18:00-20:00

Theme: **Regularity of Innovation**

Lecturer: Dr Tomoatsu Shibata

Professor, Graduate School of Economics and Management, Tohoku University

January Forum

Date: 13 (Wed) Jan. 2016 18:00-20:00

Theme: **Delusion of Innovation**

Lecturer: Dr Yuichi Washida

Professor, Graduate School of Commerce and Management, Hitotsubashi University¹⁰

December Forum

Date: 21 (Mon) Dec. 2015 18:00-20:00

Theme: **Global Movement of Human Resources as a Source of Innovation**

Lecturer: Dr Yukiko Murakami

Professor, Faculty of Political Science and Economics, Waseda University

November Forum

Date: 18 (Wed) Nov. 2015 18:00-20:00

Theme: **Emergence of the Project: Bridging Business History and Organizational Theory
- Focusing on the PV Development in the Sunshine Project**

Lecturer: Dr Minoru Shimamoto

Professor, Graduate School of Commerce and Management, Hitotsubashi University

October Forum

Date: 27 (Tue) Oct. 2015 18:00-20:00

Theme: **Impacts of the Network Advancement on Consumers Behavior**

Lecturer: Dr Kaichi Saito

Associate Professor, Department of Economics, Meiji Gakuin University

September Forum

Date: 16 (Wed) Sept. 2015 18:00-20:00

Theme: **Historical Perspective of Japan's Collaborative Research**

Lecturer: Dr Atsushi Hiramoto

Professor, Graduate School of Economics, Tohoku University

August Forum

Date: 26 (Wed) Aug. 2015 18:00-20:00

Theme: **Perspective of Turkey: Newly Emerging Leader at the Crossroad between East and West**

Lecturer: Dr. Kiyoshi Nishioka

Project Professor, Research Center for Advanced Science and Technology, University of Tokyo

July Forum

Date: 15 (Wed) July 2015 18:00-20:00

Theme: **The Surveys on the Japanese National Character**

Lecturer: Dr. Takashi Nakamura

Professor, The Institute of Statistical Mathematics, Research Organization of Information and Systems

June Forum

Date: 17 (Wed) Jun 2015 18:00-20:00

Theme: **Current Situation of Science and Technology in China**

Lecturer: Mr. Yukihide Hayashi

Principal Fellow, Center for Research and Development Strategy, Japan Science and Technology Agency

May Forum

Date: 13 (Wed) May 2015 18:00-20:00

Theme: **Cycle and Correlation between Innovation and Economic Development**

Lecturer: Dr. Masaaki Hirooka

Director, Institute of Techno-economy

Forum of X-Center Japan (FoXc-J) **Monthly Evening Forum**

April Forum

Date: 13 (Mon.) Apr., 2015 18:00-20:00

Theme: **Chronology of Human Appetites and Consumption
- Suggestion to a Co-evolution between Innovation and Consumption**

Lecturer: Dr. Shinobu Majima
Professor, Faculty of Economics, Gakushuin University

March Forum

Date: 11 (Wed) Mar., 2015 18:00-20:00

Theme: **Why has the World Leading Electronics-based Nation Declined?**

Lecturer: Dr. Yoshio Nishimura
Journalist in Science and Technology

February Forum

Date: 19 (Thu) Feb., 2015 18:00-20:00

Theme: **Harness the Vigor of Innovation Vitality in Small Countries**

Lecturer: Dr. Manabu Eto
Professor, Institute of Innovation Research, Hitotsubashi University

January Forum

Date: 14 (Wed) Jan., 2015 18:00-20:00

Theme: **Science and Technology in the Globalized Age, Standing between the Economy and Safety**

Lecturer: Dr. Koichi Kitazawa
President, Tokyo City University

December Forum

Date: 18 (Thu) Dec., 2014 18:00-20:00

Theme: **Compressed Industrial Development Condensed - Background of Development of Taiwanese High-tech Firms**

Lecturer: Dr. Momoko Kawakami

Head, East Asia Research Group, Regional Research Center, Institute of Developing Economies

November Forum

Date: 19 (Wed) Nov., 2014 18:00-20:00

Theme: **Global Stream in Risk Management: Suggestion to Business Management Strategy obtained from the Global Stream against Physical Risk of Chemicals**

Lecturer: Mr. Toyoaki Nakarai

Visiting Professor, Graduate School of Environment and Information Sciences,
Yokohama National University,

October Forum

Date: 28 (Tue) Oct., 2014 18:00-20:00

Theme: **Two Faced Nature of Information and Communication Technology (ICT)**

Lecturer: Dr. Masayo Hobo

Project Professor, Aoyama Business School, Aoyama Gakuinn University

September Forum

Date: 10 (Wed) Sept., 2014 18:00-20:00

Theme: **Parallel Path between Japan's Electrical Machinery Industry and Automobile Industry**

Lecturer: Mr. Ryosuke Izumida GFREsearch LLC, Founder & CEO

August Forum

Date: 27 (Wed) Aug., 2014 18:00-20:00

Theme: **"The Great Stagnation" or "The Second Machine Age" ?**

Lecturer: Dr. Hiroshi Takahashi

Part-time Lecturer, Japan Advanced Institute of Science & Technology

July Forum

Date: 16 (Wed) Jul., 2014 18:00-20:00

Theme: **Why should Japanese Consumers be So Tough?**

- Understanding Indigenous, Contemporary Characteristics for Marketing Strategy

Lecturer: Mr. Toshihiko Miura

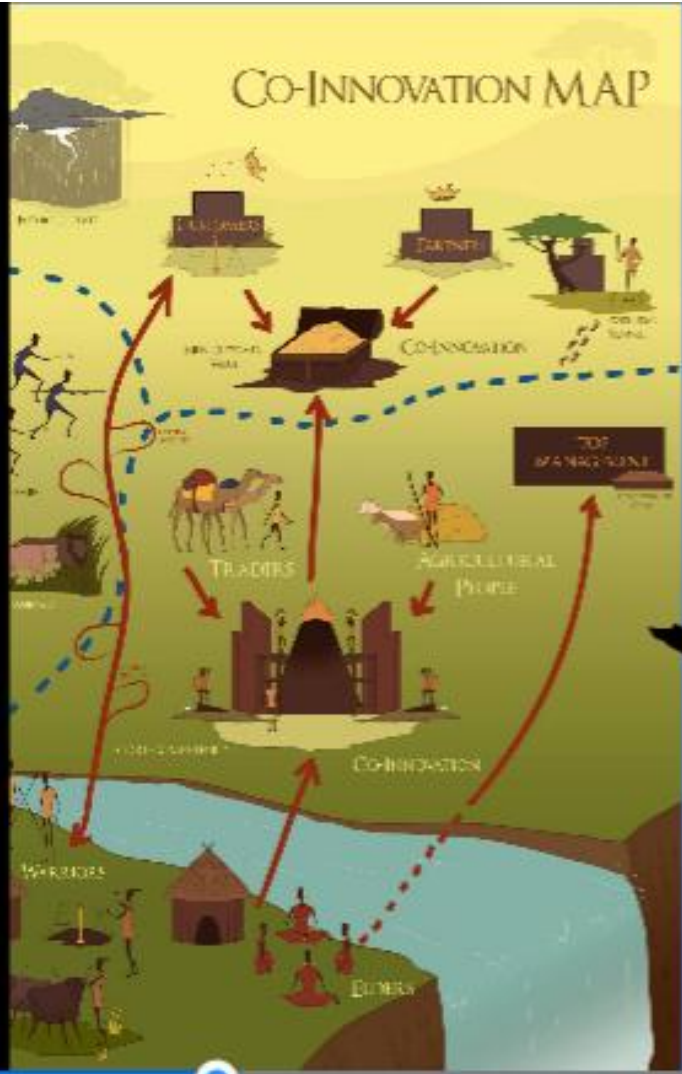
Professor, Faculty of Commerce, Director of Institute of Business Research, Chuo University

June Forum

Date: 18 (Wed) Jun., 2014 18:00-20:00

Theme: **Social Innovation: Global Trend and Implication to Japan**

Lecturer: Dr. Yaeko Mitsumori



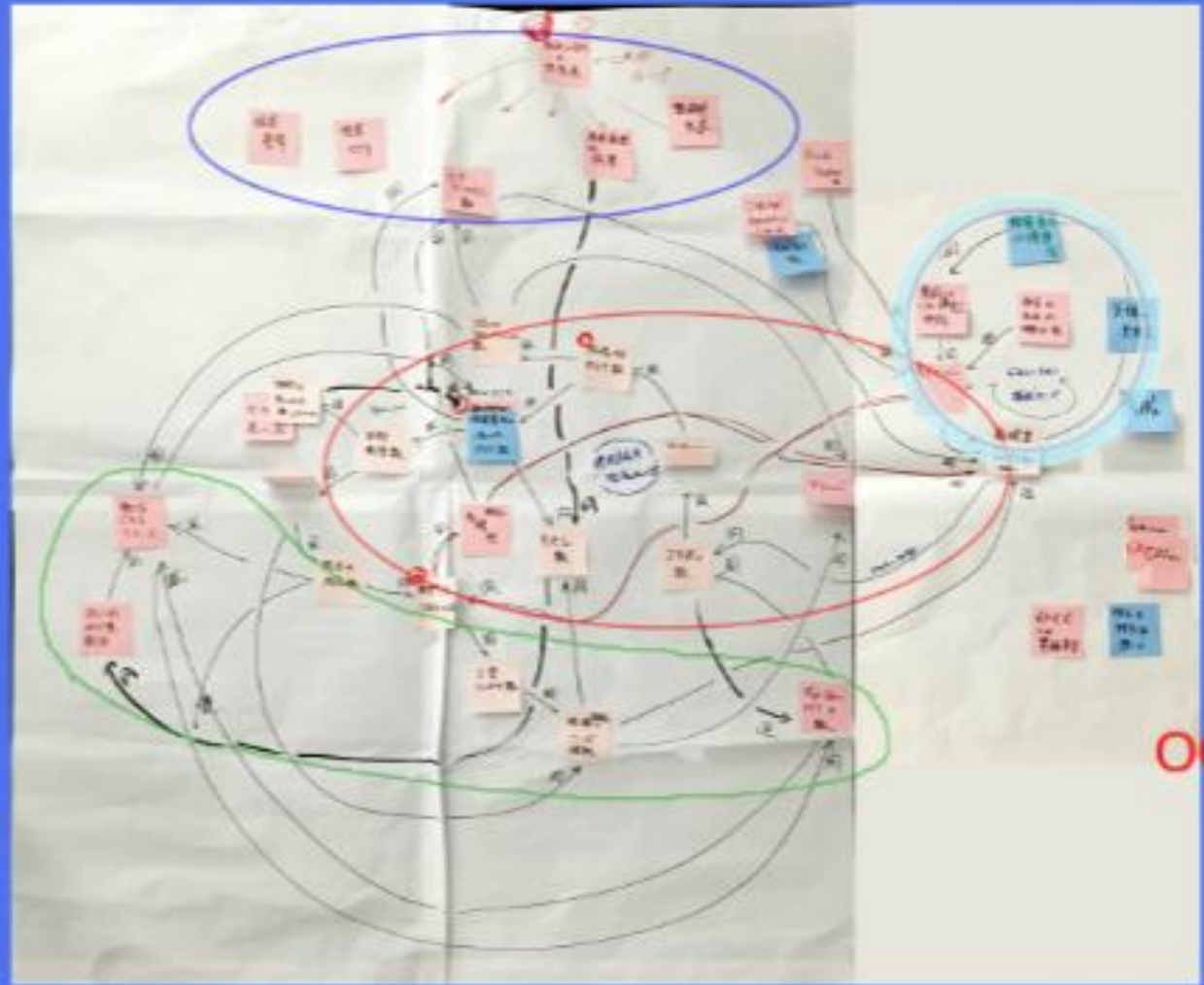
This is the perspective at the time we achieved the vision.

Named "Co-Innovation Map"



Wow!
How can we get there?





This is how we understood our organization

Forum of X-Center Japan (FoXc-J) Outcomes

1. Systems Resilience

– Bridging the Gap between Social and Mathematics

National Institute of Informatics

(Maruyama, Minami)

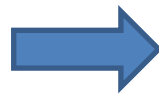
Completed 4 years program (2012-2015)

→ *Radical multi-disciplinary*

2. Urban Resilience (Yamagata)

“ Urban Resilience ” *Springer*

3. Un-captured GDP



New paradigm of ICT productivity – Increasing role of un-captured GDP and growing anger of consumers
Chihiro Watanabe ^{a, b, *}, Kashif Naveed ^c, Weilin Zhao ^d



Dependency on un-captured GDP as a source of resilience beyond economic value in countries with advanced ICT infrastructure: Similarities and disparities between Finland and Singapore
Chihiro Watanabe ^{a, b, c, *}, Kashif Naveed ^b, Pekka Neittaanmäki ^b



Operationalization of un-captured GDP - Innovation stream under new global mega-trends
Chihiro Watanabe ^{a, b, c, *}, Kashif Naveed ^a, Pekka Neittaanmäki ^a, Yuji Tou ^d



PVN

Systems Resilience Concluding Remarks



Hiroshi Maruyama
<http://systemsresilience.org>

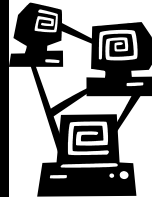
Hypothesis: There are Common Strategies for Resilience



Financial Systems



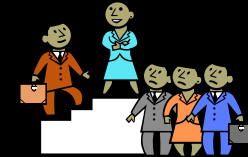
Civil Infrastructure



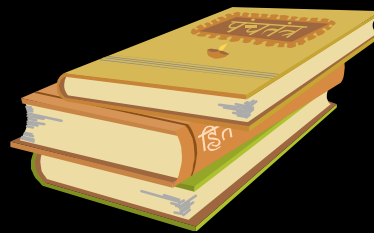
Computer Systems



Social Systems

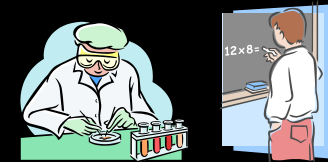


Organizations



Systems Resilience Body of Knowledge

Taxonomy, Metric, Theory, Strategy, Methodology, Tools, Best Practices, ...



Trans-disciplinary scientific community

Project Chronology

2012/2 ROIS Symposium



2012/5 Project Kickoff

2012/8 1st Karuizawa



Year 2013

2013/2 X-Center Joint Symposium

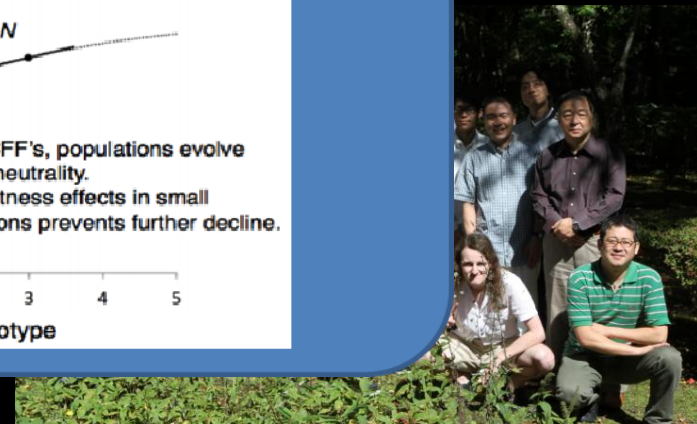
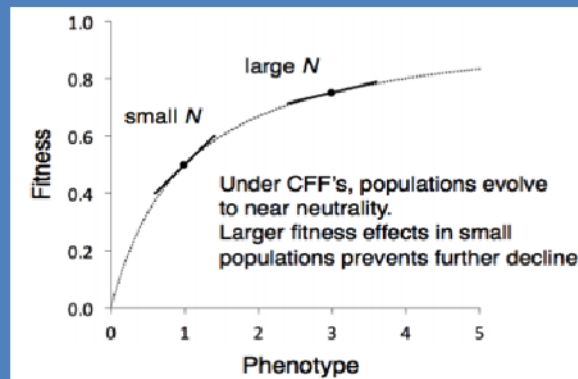


2013/7 DNS Workshop on Resilience



2013/9 2nd Kar

Diversity and Diminishing Return

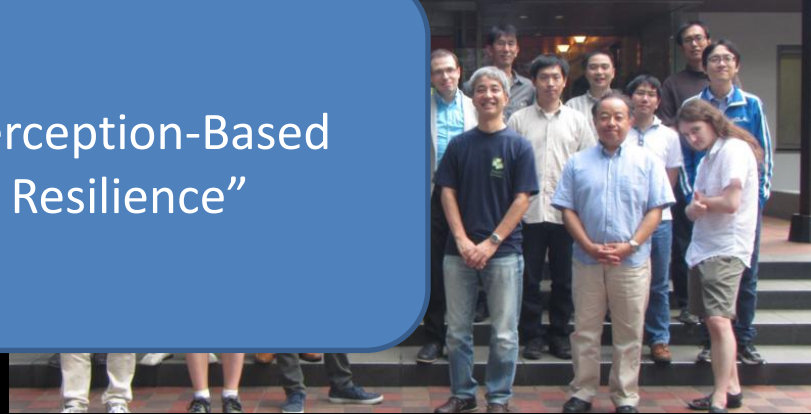


Year 2014



2014/9 3rd Karuizawa M

“Perception-Based Resilience”



2014/11 Okinawa M

“Bouncing Forward”
“Performance Metric vs Competency Metric”

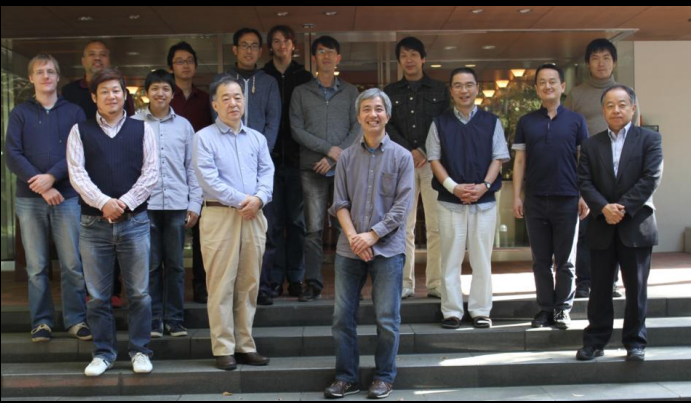


Year 2015

2015/2 Shonan Meeting



2015/9 4th Karuizawa Meeting



Systems Resilience Book to be published this month



Table of Contents

1. レジリエンスとは – What is Resilience?
2. レジリエンスの分類学 – Resilience Taxonomy
3. レジリエンスの戦略 – Resilience Strategies
4. レジリエンスの評価と数理モデル – Quantifying Resilience
5. 科学と社会 – Science and Society

Taxonomy-Strategy Matrix

Resilience Taxonomy		Phase in Resilience Cycle		Resilience Strategy																								
				Increased Margin	Backup	Interoperability / Modularity	Diversity Control by Index	Portfolio Management	Diminishing Return	Distributed / Decentralized System	Risk Transfer / Insurance	Training	Controlled Stocks	Management Cycles	Maximizing Efficiency	Control Human-Induced Causes	Prediction of Shocks	Early Warning Systems	Situational Awareness	Damage Control	Policy Switch	Empowerment of Field Personnel	Optimization of Resources	Altruism	Boundary Expansion	Postmortem	R&D Investment	Consensus Building
Type of Shock	Target System	Redundancy	Diversity	Normal Operation										Early Warning		Emergency		Recovery		Innovation								
		Design Time																										
Type of Shock	Natural vs Intentional	Natural Disaster	⊙																									
		Human-Induced Intentional Attack	○																									
	Frequency	Often	⊙	⊙	○	○																						
		Low Frequency	○	○	⊙	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		Rare				⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	
	Predictability	Predictable																										
		Unpredictable	⊙	⊙																								
	Duration	Acute																										
		Chronicle																										
	Internality	External Cause																										
		Internal Cause																										
	Target System	Domain	Biological / Ecological																									
Engineering			⊙	⊙	⊙		○	⊙	⊙	○	⊙																	
Civil Infrastructure			⊙	⊙			○	⊙	⊙	○	⊙																	
Financial							⊙	⊙	○																			
Organizational							⊙			○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Autonomy		Societal																										
		Autonomous		○			⊙	⊙	○																			
Granularity		Managed					⊙																					
		Individual																										
		Group of Same Type																										
Objective Function		Ecosystem					⊙																					
		Simple																										
	Complex																											
	Structural	⊙	⊙	⊙																								
Recovery Type	Functional			⊙	⊙	⊙	⊙	⊙																				
	Adaptive					⊙	⊙	⊙																				

What I have learned

SCIENCE - MARCH 18, 2010


Holism 2.0: Towards the Defragmentation of Science

Text: Gastredacteur

Background

Since prehistoric times human beings have tried to explain and control their overwhelmingly complex and threatening environment with tales, beliefs and rituals. Only relatively recent is the development of science, an approach that is somehow different from anything we did before, and so successful in solving problems that many people have gained a deep faith in our ability to 'carve the future'.

Dies Natalis lecture Wageningen Universiteit 2010,
Marten Scheffer



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Not everyone, however, feels equally confident in this extrapolation of scientific victory. Most of the success comes from branches of science that study only tiny subsets of the complex world, and the disciplines that attempt to study larger chunks, such as ecology, sociology and climatology seem to make much

“Radical multi-disciplinarity”

<http://resource.wageningenur.nl/en/show/Holism-2.0-Towards-the-Defragmentation-of-Science.htm>