

【Research members】

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Introduction to the establishment / Research theme

【Introduction to the establishment】

Our objective is to research and develop future style industry structure and business design by high technology and advanced research. Our goal is revitalize Japanese industry by 'Things and Systems'. In parallel researching with industry, this research division intended to find out research seeds and to make seed technology base of future Business design.

● **Research on Service IT**

From the viewpoint of Servitization, this group research about efficiency, computerization and value proposition regardless of production and service as a total system.

● **Research on Advanced THINGS and SYSTEMS**

From a management of technology of view, this group research process of the transformation from products oriented to integrate service, technical management, HR and organization for the management systems of transforming to service or the global expansion that integrated business administration.

● **Research on DATA Science**

This team makes research, data analysis, security system, privacy system and system interoperability on BIG data, which I collect from the real world, based on computer science and data mining technology.

● **Research on Practice Study**

This team research and study on practice case which THINGS industry has experienced to change or reform. Cases are mainly sort out from Things and System consortium member companies and global companies.

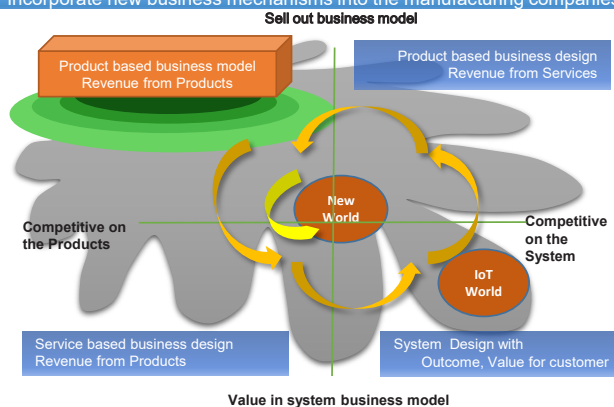
● **Research on Design Thinking**

This team investigate Design Thinking approach.

● **Research on Fintech**

This team investigates the parameter for creating added value and providing newly financial service for a customer.

Incorporate new business mechanisms into the manufacturing companies.



Basic research outcome 1

(-2016/3)

WG1a Business Research 1	This WG focused at the conversion (Pivot) of direction which occurs in business creation. The case of Pivot of each company was typified and "Things and systems" was classified.
WG1b Business Research 2	This WG proposed the assumption, "THINGS and SYSTEMS" nearly equals to BUSINESS DESIGN.
WG2 HR and Organization	This WG arranged the organization design guideline for starting "Things and systems".

(2016/4- 2017/3 intermediate outcome)

WG1 Enablerr for Things and Sysmtes	Members: Panasonic, Fujifilm, Ishida, Fukushima Ind., Fuji Xerox, Komatsu, Nitto Kogyo, Torishima Pump, NGK Spark Plug, TUS, Mitsubishi Hitachi Power Systems, IMS Solutions, Kanematsu Granks, Teijin, Plantec Consulting	To study enablers to develop products and services as Things-and-Systems. Four common factors are found, "A sense of crisis", "Leverage of core and emerging technologies", "Passion and leadership of Leader", and "Collaboration beyond enterprise borders".
WG2 Things and Systems in a virtual company	Members: Teijin, Hitachi, Canon, AIST, Secom, Fujitsu, NEC, Nitto Kogyo, Intel, NGK Spark Plug, TUS	To study realistic challenges in a virtual company with the hypothesis studied before. Defined Trade show company scenario and ran role plays as CEO, CMO, CTO, and CHO.
WG3 Native HR for Things and Systems	Members: Salesforce.com, Emerson Japan, Panaonic, Appreso, AIST, Integral Water Solutions, Mitsubishi Electric, Yahoo, Daikin, Worth Technology	To study HR capability for Things-and-Systems. Three essences are found, diverse talents collaboration, leaders capability to manage diversity and empower the team.
WG Fintech	Member: GPIF, TUS	To study added value in financial services in ESG area with quantitative analysis.

Basic research outcome (2016-)

<Dissemination by Conference and Symposium>

METI KANSAI / Things and Systems Research	"Upcoming Business Model in IoT era", 2016.5, (Tanaka, Hazekawa)
Intellectual Property Association of Japan, 14 th Conference	"Business and Technology domain changes in IoT evolution", "Innovation process changes in Open Innovation 2.0", 2016.12, (Hazekawa)
National Institute of Advanced Industrial Science and Technology / Things and Systems Research et.al.	"Industrial Servitization in the process of Things and Systems" 2017.1, (Tanaka)
Things and Systems Association / Research	Annual Conference 2017.3, (Tanaka, Numao, Kajimoto, Seki, Hazekawa)
Keidanren, The 21 st Century Public Policy Institute Symposium	"Monetization with Open Innovation" panel, 2017.4, (Tanaka)
Open Innovation 2.0 2017 Conference by EC Romania	"National innovation ecosystems, example EU-Japan" 2017.6 (Tanaka)

<Invited lecture>

Global Forum	"Digitalization: THE GLOBAL TRANSFORMATION", 2016.09, (Tanaka)
Small & Medium Enterprises and Regional Innovation, New Value Creation Exhibition	"New Value Creation by Things and System approach" 2016.10, (Tanaka)
Mizuho Information & Research Institute, Global Business Strategy School	"Changes in Business Fields and Technological Fields along with the Advancement of IoT" 2017.2, (Hazekawa)
Japan Embeded Technology Association, IoT Technology West	"User Experience Innovation by IoT" 2017.7, (Seki)
Central Japan Industries Association, Future coming	"Things and Systems Approach with Open Innovation" 2017.8, (Ishigaki)
Profuture, HR Summit 2017	"Idea creation from Things-only to Things-and-Systems", 2017.9 (Tanaka)