Division of Things and Systems
2015/04/01-2020/03/31

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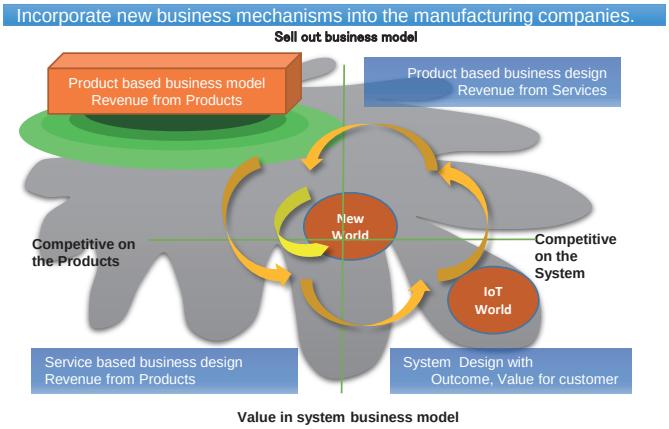
Introduction to the establishment / Research theme

【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.



Value in system business model

- **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.

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 "Thinks and systems" was classified.
WG1b Business Research 2	This WG proposed the assumption, “THINGS and SYSTEMS (TaS)” 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)

WG1 Enabler for Things and Systems (TaS)	As the enabler, the four factors are found: “A sense of crisis”, “Leverage of core and emerging technologies”, “Passion and leadership of Leader”, and “Collaboration beyond enterprise boarders”.
WG2 TaS Virtual company exercise	To study realistic challenges in TaS 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 TaS	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	To study added value in financial services in ESG area with quantitative analysis.

(2017/4- 2018/3)

WG1 Enabler for Things and Systems (TaS)	To accommodate dynamic TaS market, two essentials are found: “Concept making, focus customer segment, and value proposition” and ”mutual prosperity and co-evolution in eco-system”
WG2 TaS Virtual company exercise	Assumed Wellness business as exercise with TUS students involvement. TaS educational aspects are considered through essential consumer needs and a creation of value.
WG3 HR, Organization, Transformation model	Digital transformation patterns in enterprises were studied. Three elements of tactics to tackle can be found: “Partial or All-at-once”, “Top-down or Bottom-up”, “Lean or bi-modal”.

Basic research outcome (2017/4-)

＜Dissemination by Conference and Symposium＞	
Keidanren, The 21st Century Public Policy Institute Symposium	“Monetization with Open Innovation” panel, 2017.4, (Tanaka)
Open Innovation 2.0 2017 Conference by European Committee Romania	Keynote “National innovation ecosystems, example EU-Japan” 2017.6 (Tanaka)
ESG Investment in Japan/Amundi and Things and Systems Resarch	ESG studies in Open Innovation, Performance, Environmental Management etc. 2017.12 (Tanaka, Yamashita, Sasaki, Ohnuma)
Intellectual Property Association of Japan, 14th Conference	“Functionality evolution through Digital Transformation” 2017.12 (Hazekawa, Seki, Sato)
Things and Systems Association / Research	Annual Conference 2018.3, (Tanaka, Numao, Kajimoto, Seki, Hazekawa, Sato)

＜Invited Speech＞	
Japan Embedded 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)
MIRAIKENKYU (JST/CRDS suppored)	“Manifacturing involving Society ” 2017.9 (Hazekawa)
Global Forum 2017 (European Committee supported)	Keynote “Proposal for national business ecosystem” 2017.10 (Tanaka)
Co-Creation ”Kyosou” Forum, Nikkei	“Service creation through creative collaboration and co-creation expansion” 2017.11 (Hazekawa)
100 NIN KAIGI Shibuya Vol.2	“Creative collaboration in Shibuya” 2018.1 (Hazekawa)