

Knowledge Capital Management Office

May. 2013

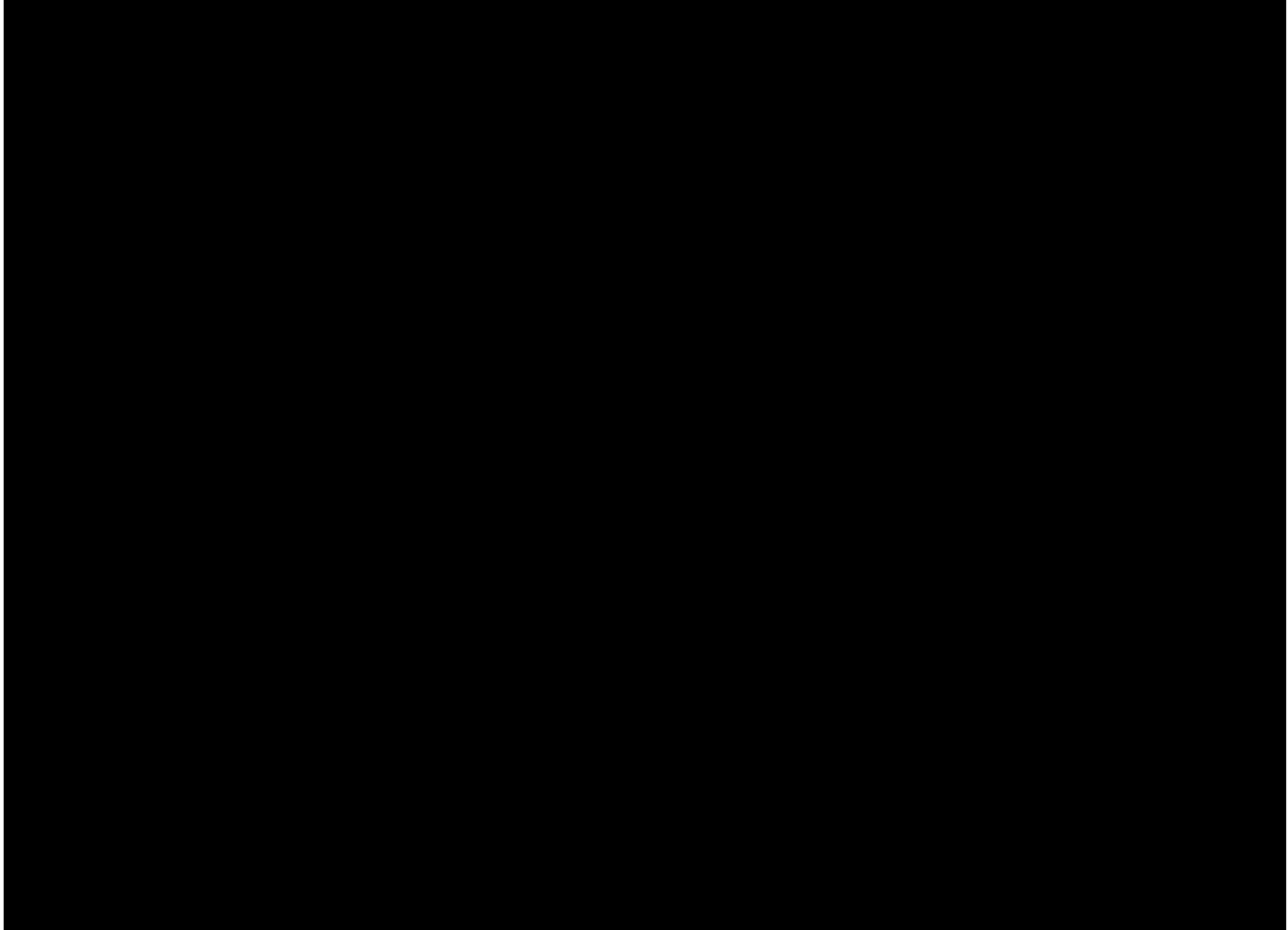
Shinji Shimojo, Osaka U JAPAN

<http://sites.google.com/site/sshimojo/talks>



Topics

- Knowledge Capital Project
- Concept of KMO
- Current Status





Open on 26th April 2013

Umekita Phase 1 Development Area Project GRAND FRONT OSAKA

KNOWLEDGE CAPITAL

<http://kc-i.jp/>

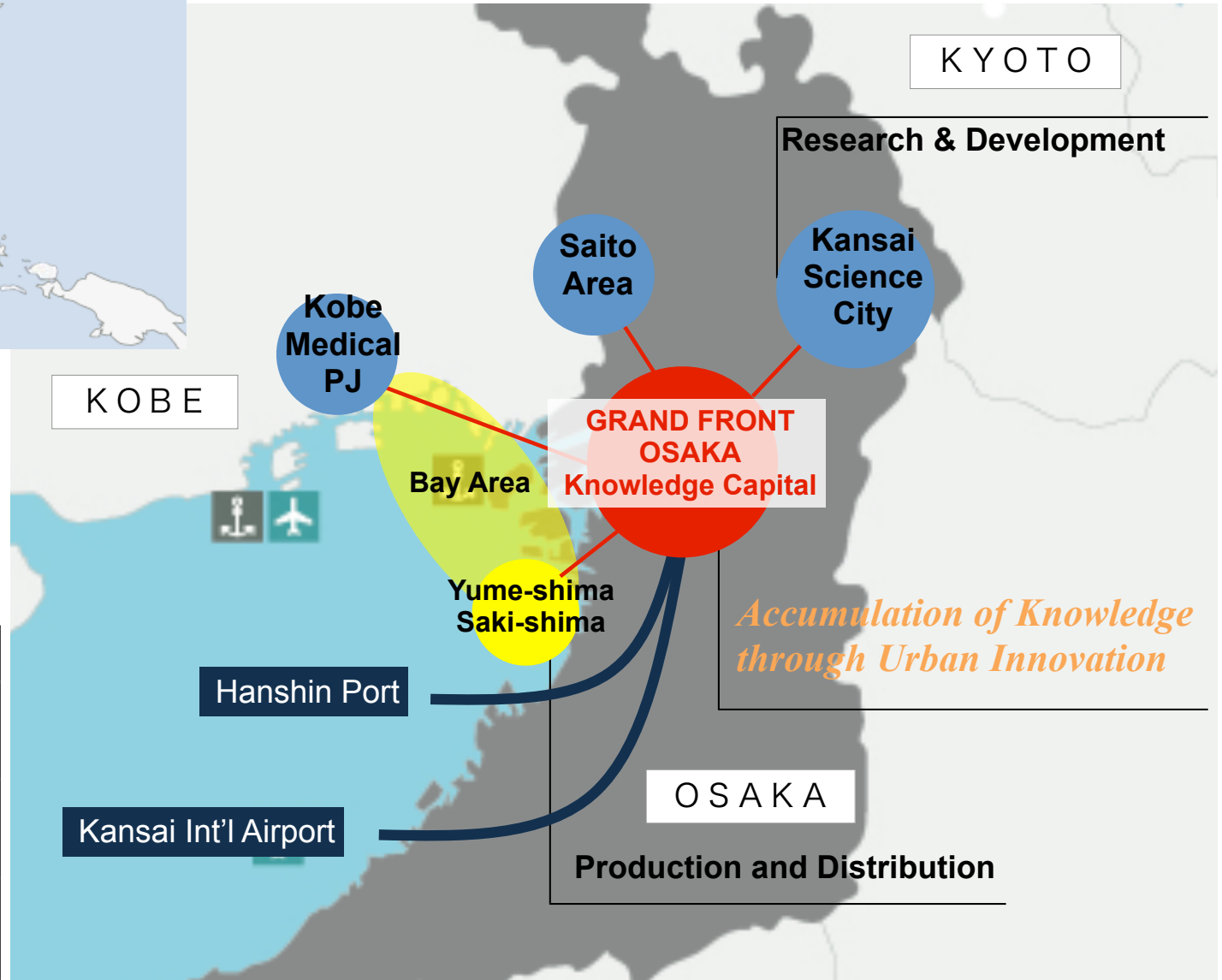


■ The Potential of Osaka and Kansai

A gateway from Osaka and Kansai to Asia and the world



Directly connected to Asia and the world



<Key Statistics>

	Japan	Kansai
Area (km ²)	378,000	31,000 (8%)
Population (thousands)	128,000	21,700 (17%)
GDP (trillion Yen)	483	78 (16%)

■ Location of the Development Area

*Serving 2.5 million passengers daily,
a new development will be born in the city centre of Osaka*



Location

Ofuka-cho, Kita-ku, Osaka City

District Area

Total Site Area – approx. 24ha

Phase 1 Development Area – approx. 7ha

Brief History

2004 「大阪駅北地区まちづくり推進協議会 (north Umeda District Promotion Committee)」 was built. Set Promotion Plan.

2005 Osaka City decided to expand floor area ratio from 200% to 800% maximum.

2006 May, Joint Venture of 12 companies lead by Orix Real Estate won the open bid. Concept of Knowledge Capital began to realize.

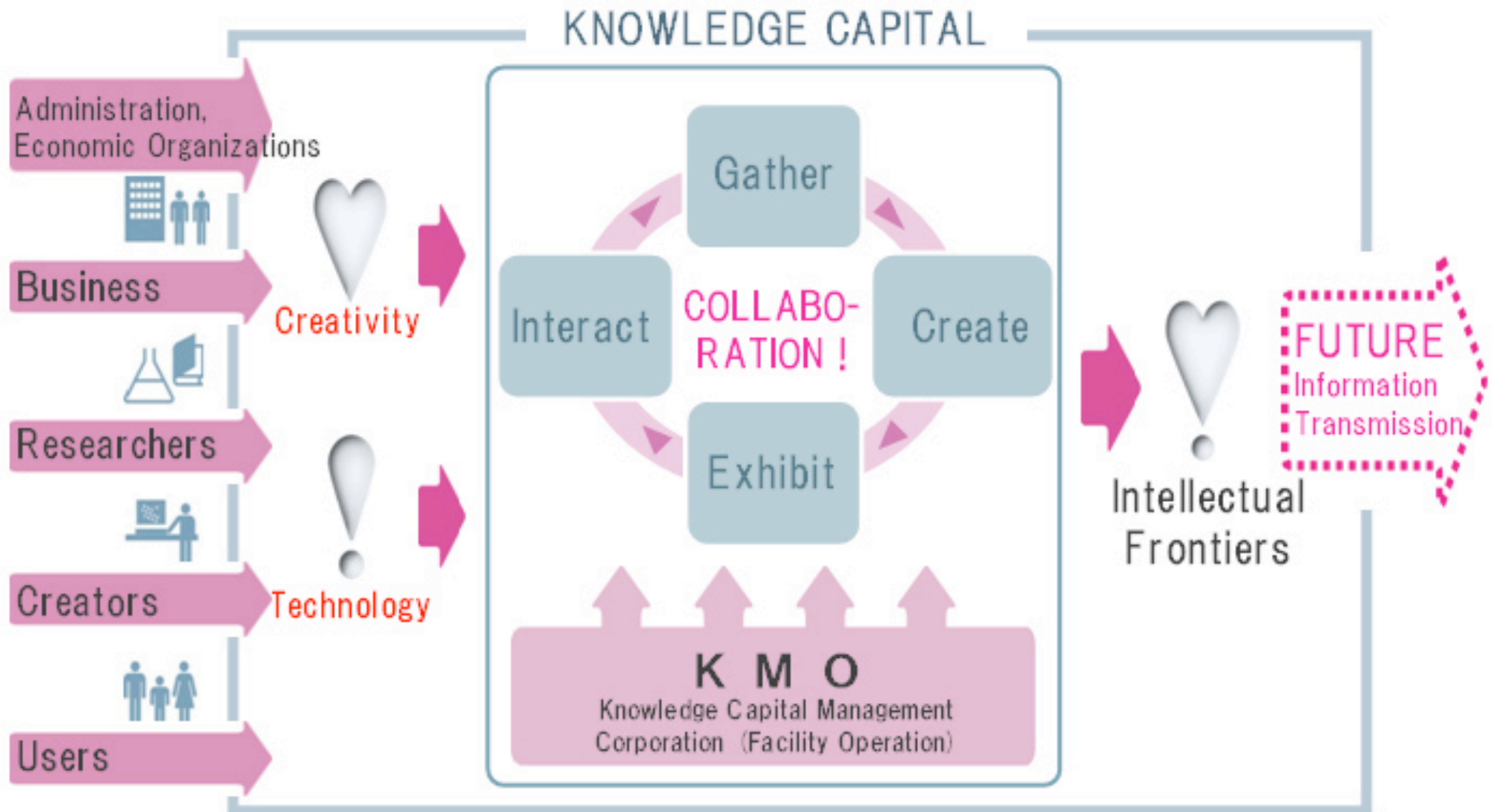
2009-2011 Trial Event for Knowledge Capital

2012 Knowledge Capital Award

2013 April Grand Front Osaka was open.

Concept of Knowledge Capital

Knowledge Capital is a multipurpose complex to create new imaginative standards by fusing “creativity” and “technology.”



KMO presentation at Business seminar 2011 in Tokyo

Concept



**Human
Creativity**

Art
Design
Creativity
Mentality emotions
Social ethics
Operability
User–friendly interfaces
Harmony with global environment
Safety security



×

Technology

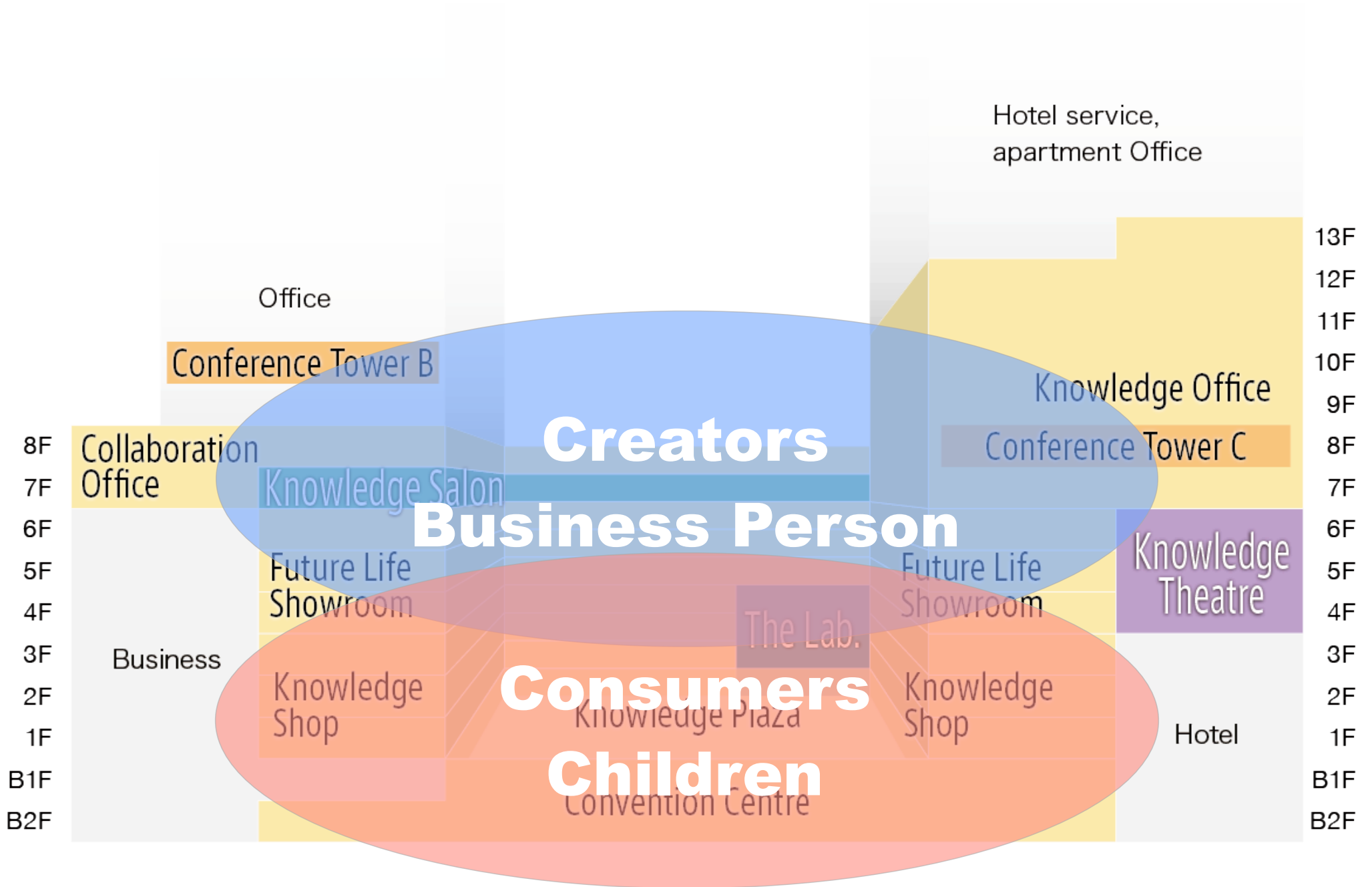
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New Values

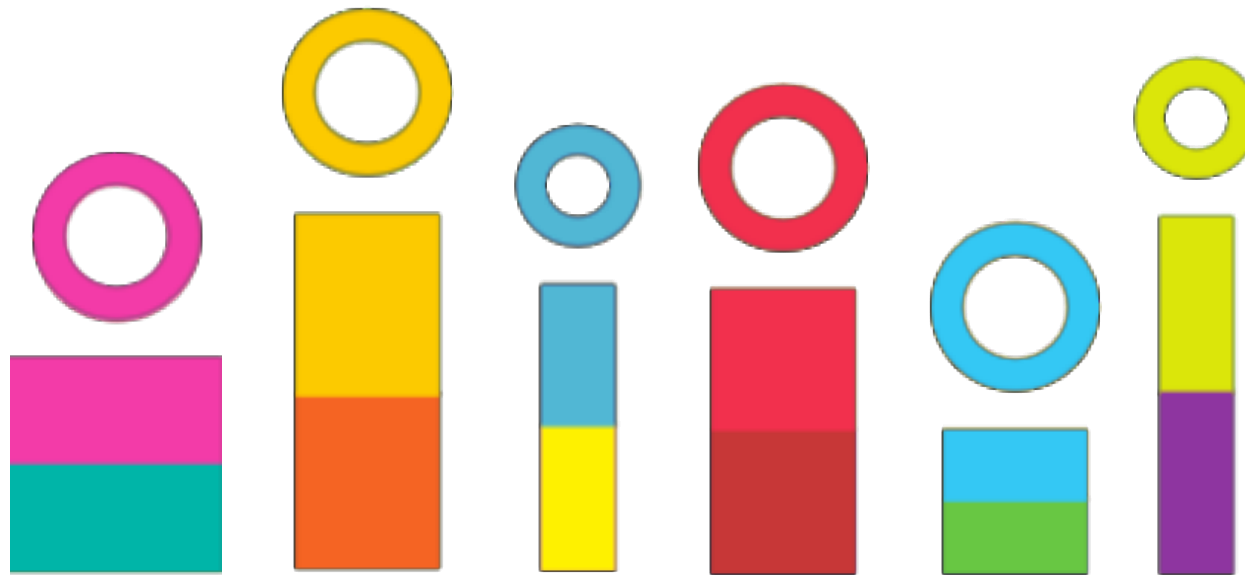
InfoCommunication technology (ICT)
Robots
Environmental technology
Advanced science
Low technology
Health science
Health care
Visualization
Energy technology



New or improved products commodities
Services shops
Intellectual property
Culture
Society Structures
Communities regions
Markets consumers
Production methods mechanisms
Human resources

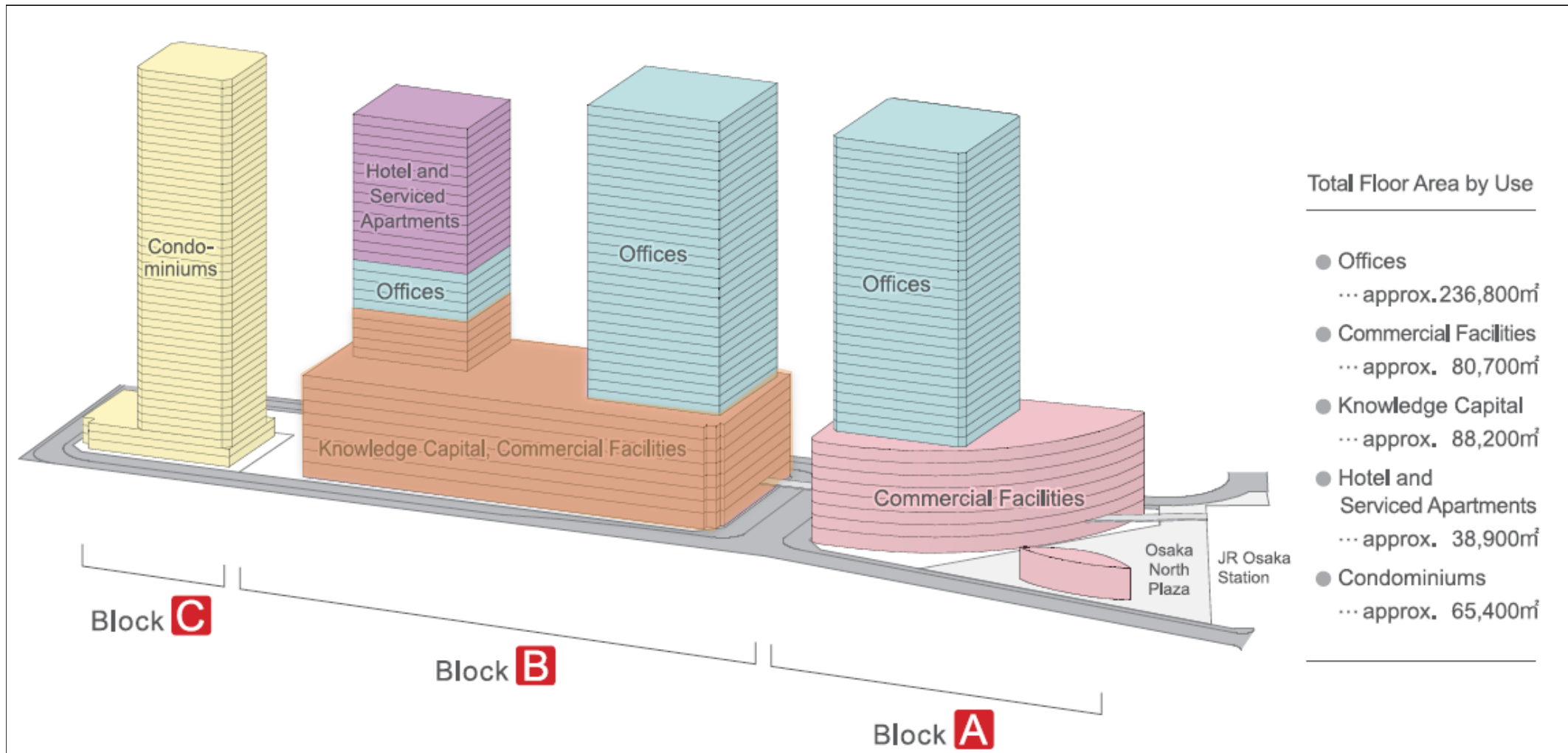


KNOWLEDGE CAPITAL



■ Facilities in GRAND FRONT OSAKA

Combining a variety of urban functions to establish *Knowledge Capital* as a core facility.



Knowledge Capital Zone (facilities and functions)

Gather

Knowledge Salon

『A membership-style exchange salon』
approx. 1,500m²



Create

Knowledge Offices

『Offices in a variety of types』

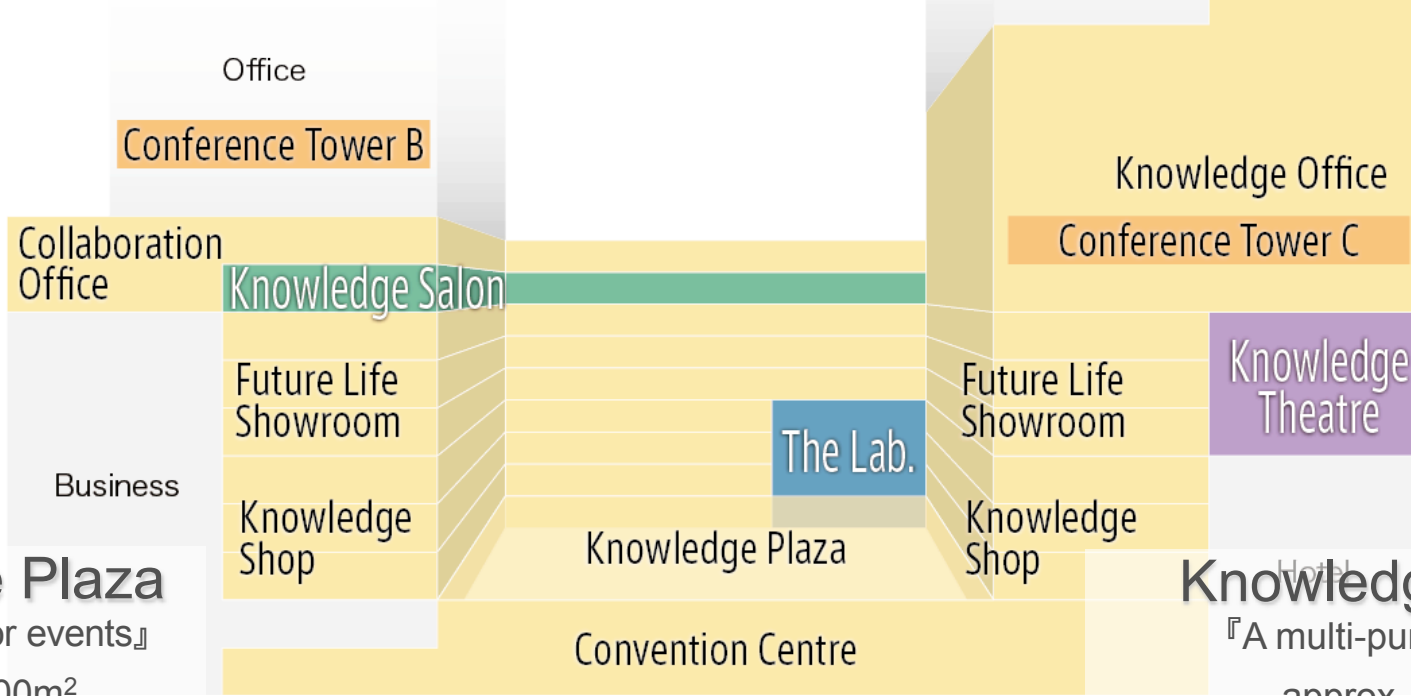
approx. 11,000m²



Interact

Knowledge Plaza

『An indoor plaza for events』
approx. 1,200m²



Exhibit

Convention Center

『Accommodates up to approx. 3,000 persons』
approx. 5,760m²



Future Life Showroom

『Space to propose a future life』
approx. 21,000m²



The Lab.

『A hub for exhibition and promotion』
approx. 3,100m²

Knowledge Salon



■ Floor plan of Knowledge Salon



■ Image of Collaboration office

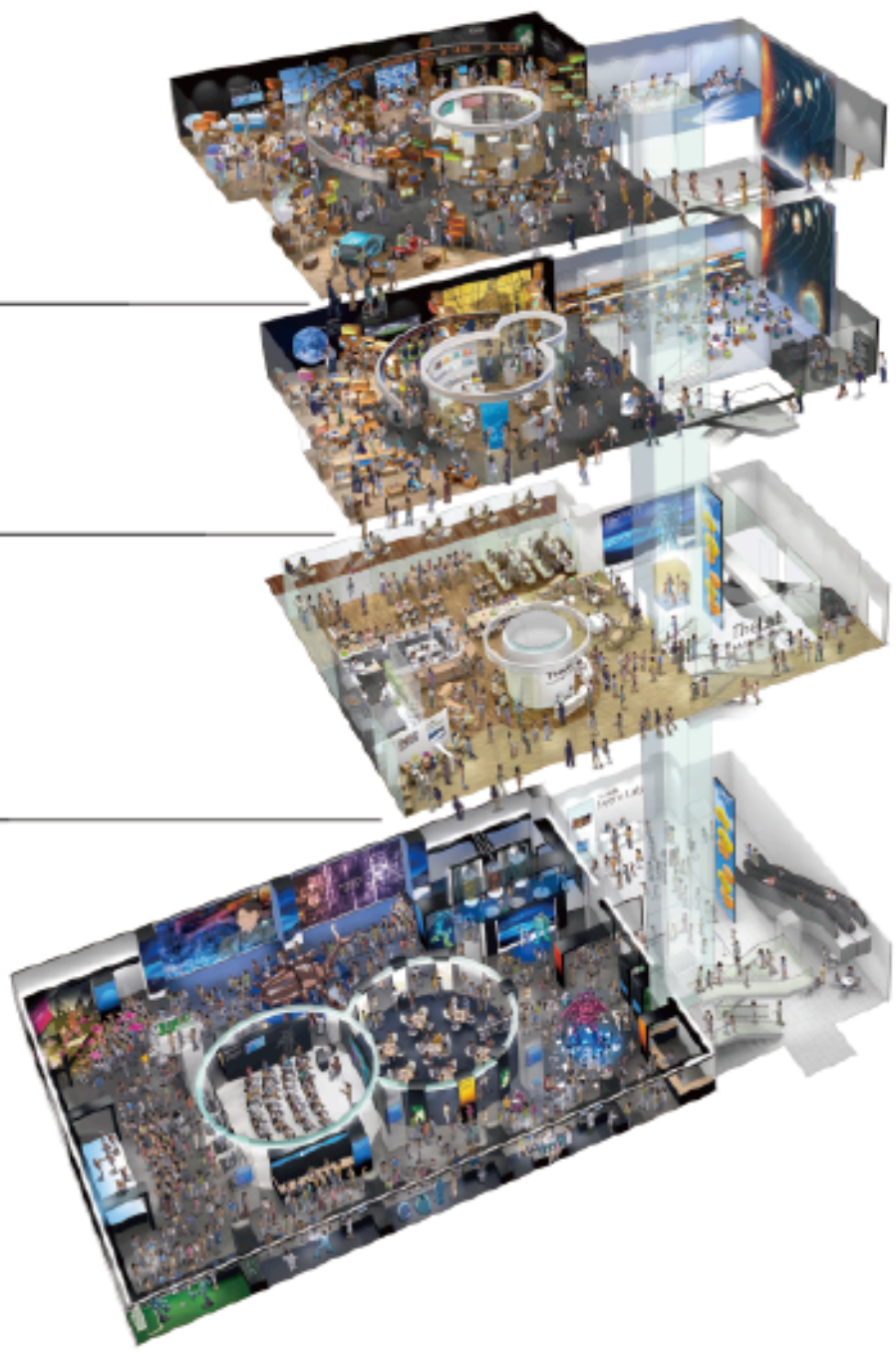


The Lab.

みんなが世界一研究所

**The World's Best Laboratory for Everyone by Everyone.
Impress with the World's Best .
Move with amazing technology.
A laboratory focusing on fun – made and shared by all.**

The Lab. Floor configuration

3F	<ul style="list-style-type: none">• Company Lab• Discussion Area	
2F	<ul style="list-style-type: none">• Company Lab• Activity Area• Collaboration Area	
1F	<ul style="list-style-type: none">• Cafe Lab• Knowledge Gallery• Information Desk	
B1F	<ul style="list-style-type: none">• Event Lab	

Facade



View from 2F

Inside:
Communication Area



Information

Exhibition of activities at the Lab.

Digital Signage

The Lab. 3F Discussion Area



The Lab. 2F Activity Area



Communicator



- **Workshops**
- **Presentations**
- **Seminars**
- **Live Video streaming broadcast**

■ Exhibitors at Activity Lab.

- **National Institute of Information and Communications Technology (NICT)**
- **Green Road Motors Corporation**
- **Konoike Institute of Technology**
- **Dai Nippon Printing Co., Ltd. (DNP)**
- **Graduate School of Information Science and Technology, University of Tokyo**
- **Toppan Printing Co., Ltd.**
- **Nippon Telegraph and Telephone Corporation**
- **Muscle, Inc.**

Outreach

(announcement of research results)

NICT 200" 3D Glasses-less Display



Demonstration Experiments

Green Motors Inc.(Electric Vehicles)

いま、生まれ変わる、トミーカイラ

Tommykaira 



Promotion

Muscle Inc. Health Care Robots



Place for business and building relationships with the end-user

FUTURE LIFE SHOWROOM

Exhibitor



Get a deeper understanding rather than merely image.

Visitor



Visitors can learn about corporate activities through experience and participation in project /service development.

■ Participating Companies of Future Life Showroom

- Softbank (telecommunication)
- Suntory (brewery & beverages)
- Subway Japan (Sandwiches F&B)
- Pieroth (wine company)
- ICT Network (Docomo shop)
- AppBank Store
- Asics (sport gear)
- Cocacola West (beverages)
- KDDI (telecommunication)
- Urge (musical instrument retail)
- Kansai Electricity Group (electricity company)
- Daikin (air-condition engineering)
- Sekisui House (construction company)
- ABC (housing, design company)
- Kojitsusanso (hiking equipment company)
- Kinki University
- Rohto Pharmaceutical Company
- Yodogawa Christian Hospital

Subway Japan



■ Knowledge Theater

KNOWLEDGE CAPITAL

大阪大学ロボット演劇プロジェクト × 吉本興業
世界初演! ロボット演劇版

銀河鉄道の夜

The Night of the Milky Way Train

原作: 宮沢賢治 作・演出: 平田オリザ (大阪大学)
ロボット・アンドロイド開発者: 石黒浩 (大阪大学 & ATR)

公演期間 2013年5月2日(木) → 5月12日(日)
先行予約日 3月2日(土) **一般発売日** 3月10日(日)

ナレッジシアターにて上映! (グランフロント大阪 ナレッジキャピタル4階)

PRESENTATION

Business presentation

Knowledge Plaza



Convention Center



うめきた、ITで成長する街 「あなただけの情報」提供



グランフロント大阪、朝日新聞社

The Asahi Shimbun

グランフロント大阪、こんな街に

コンパスサービス

街にチェックイン
その人に適した情報を提供

ソシオ

特定のテーマを呼びかける「キャプテン」を中心にさまざまな活動を展開する街公認のコミュニティー

2階層の複合的なエリア
うめきた
梅田駅
北口広場
武大駅

歩道(公道)にオープンカフェ
規制緩和による全面での創出

グランフロント大阪、こんな街に

【木村和規、笹井継夫】「大阪最後の一等地」と言われたJR大阪駅北側のうめきた。四半世紀かけて進められてきた再開発も、最初の街開きまで1カ月に迫った。最新の情報技術や規制緩和の特典を駆使めざすは、自ら成長する「未来の街」

うめきたの先行開発区域「グランフロント大阪」がオープンするのは4月26日。その中には、あちこちに40インチ程度を縦にしたようなタッチパネル画面が設置されている。

街全体で36台。IT機能「コンパスサービス」の端末だ。ICOCA（イコカ）などのICカードに対応する。

専用のカードやスマートフォンアプリを使えば、買い物や催しへの参加など街での行動記録を匿名で蓄積し、好みを分析。時間帯や天候も踏まえた「あなただけの情報」を提供する。

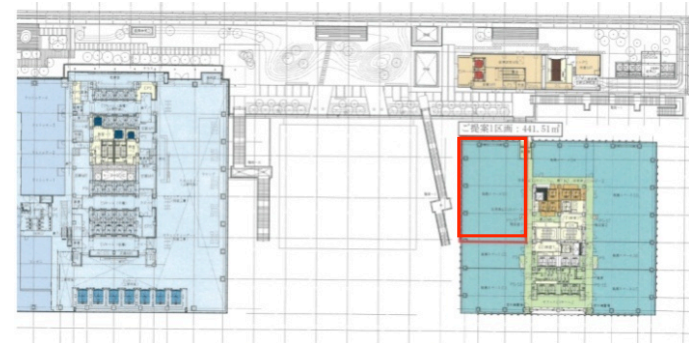
例えば……昼食時。恋人といっしょのあなたがカードをかざした。すると画面は、

asahi.com
2013.03.25

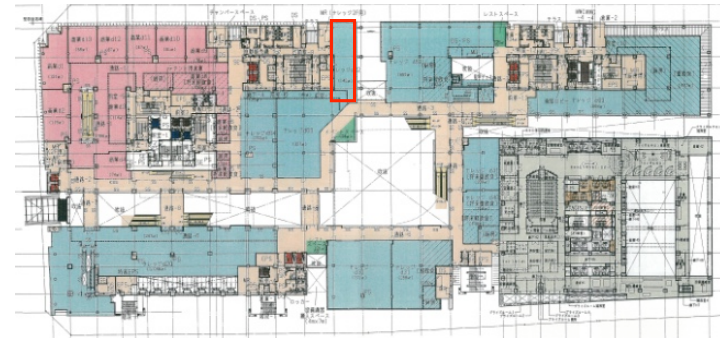
NICT/Osaka U in Knowledge Capital City



9階



3階



- The lab

- Museum space (171.71m²) with 200inch 3D display

- Booth at 2nd floor, 8 tiled display with high speed network

- Knowledge office

- with Osaka University and other organization (441.32m²)

Fusion of art and technology

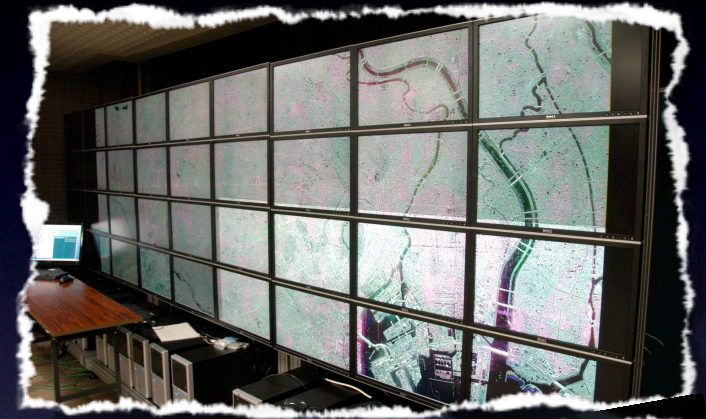
- Why
 - We are going to the era of services
 - Innovation happens by fusion of multiple stream of technology
 - Social implication and assesment of technology is highly important
- Do
 - Breakthrough through the collaboration of art/design and technology
 - team with multiple talent
- Reference
 - MIT Media Lab
 - Arz Electronica
 - CalIT2
 - IDEO, Stanford D'school
 - E-dream Institute at UIUC



Vislab Osaka

Information be made easy to understand by art, design and technology

- Interdisciplinary project with engineers, designers, artists, and students, etc
- "Visualization" takes difficult-to understand information and shows it in a more easy-to-understand way through art and design.



HPCI

Biogrid KANSAI

Drug Discovery



Supercomputer
Cloud/Storage

CaIT2
NCHC

Promotion

NiCT

Open
Innovation

Osaka Electric U.

Vislab

Kwansei Gakuin U

Kansai U

Human Resource
Development

Visualization, Interaction

MOPA
NPM
Uffizi



Entertainment
Networked Museum

Cyber KANSAI Project



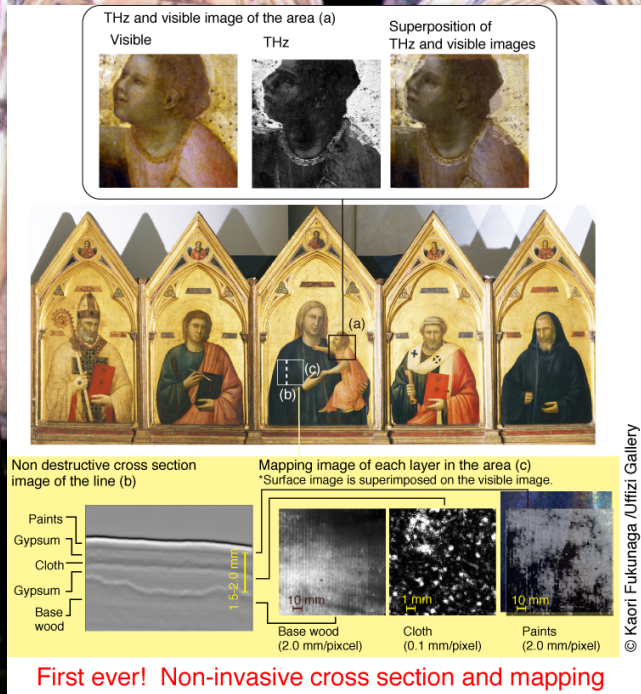
Large scale Display

 High Speed Network
Ubiquitous Technology



e-heritage

Giotto+TeraHerz+TDW



Kadobayashi, Chikama, Fukunaga
uffizi museum

myGallery Interactive



AAM Muse Award 2012

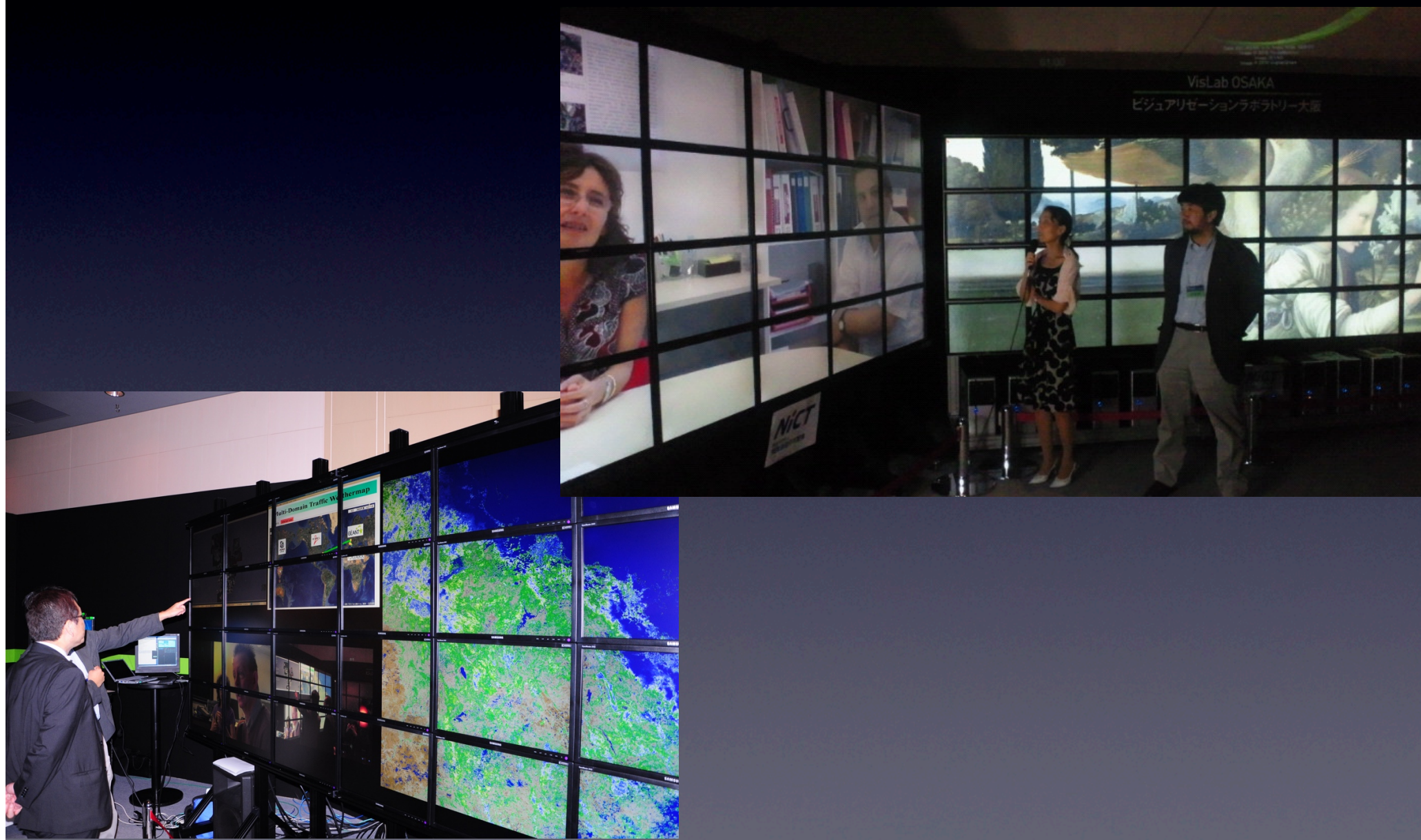
Gold for Honeysett & Din Student Award



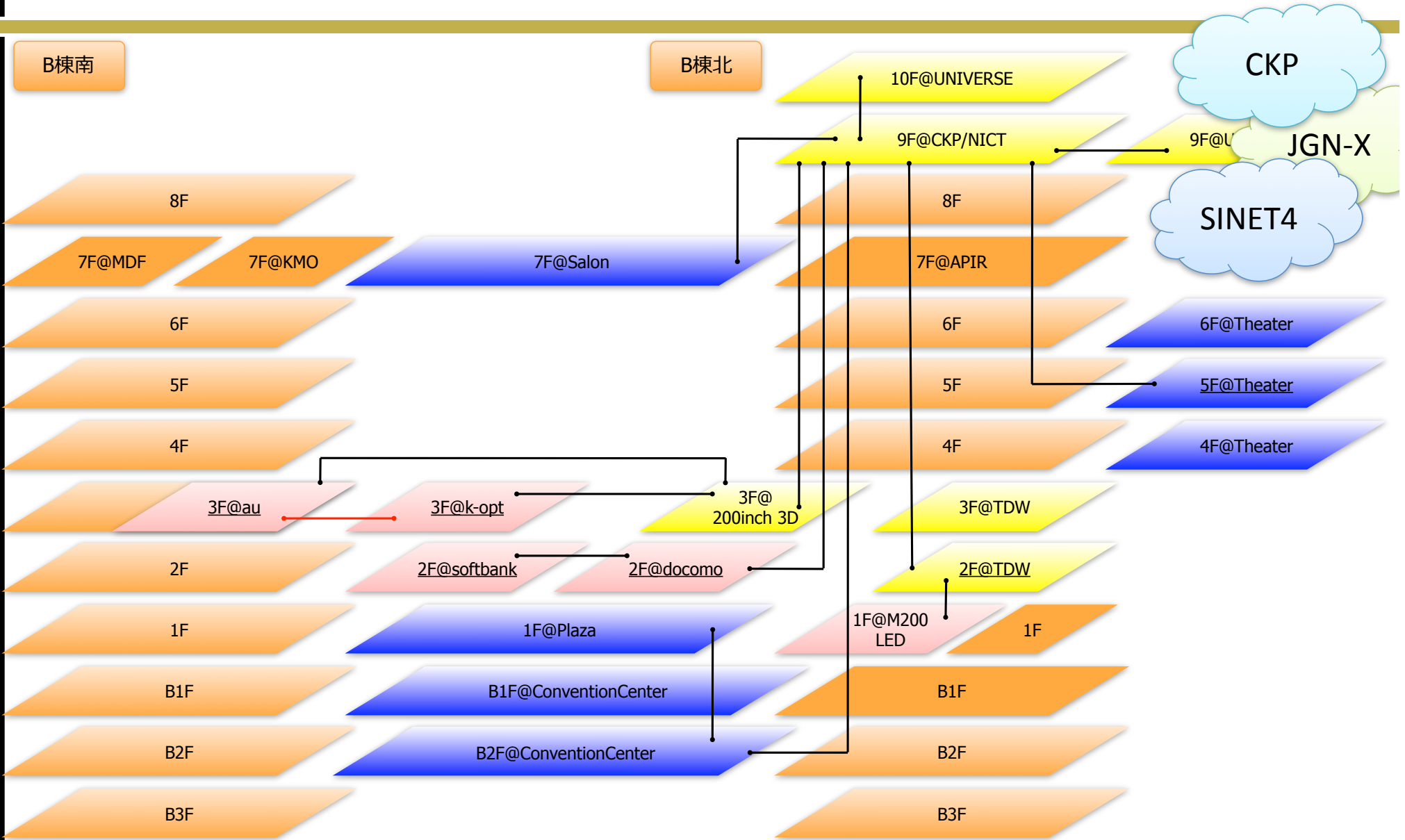
MOPA
UCSD
NICT



Trial 2010



CKP/NICT Umekita Trial Network

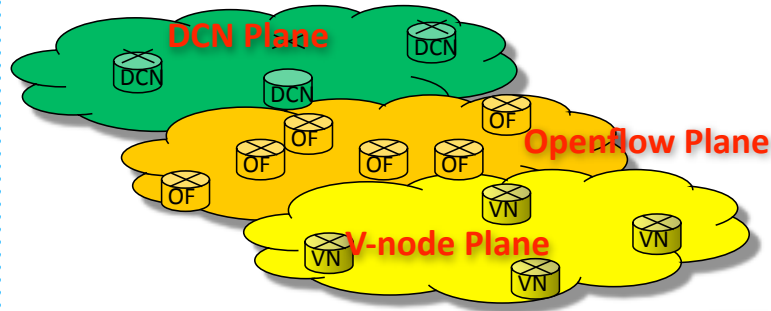


JGN-X Network infrastructure Overview



NWGN Layer

Realizing multiple New Generation Network Planes on a virtual JGN-X network. Also made available is to interconnect with other Testbeds.



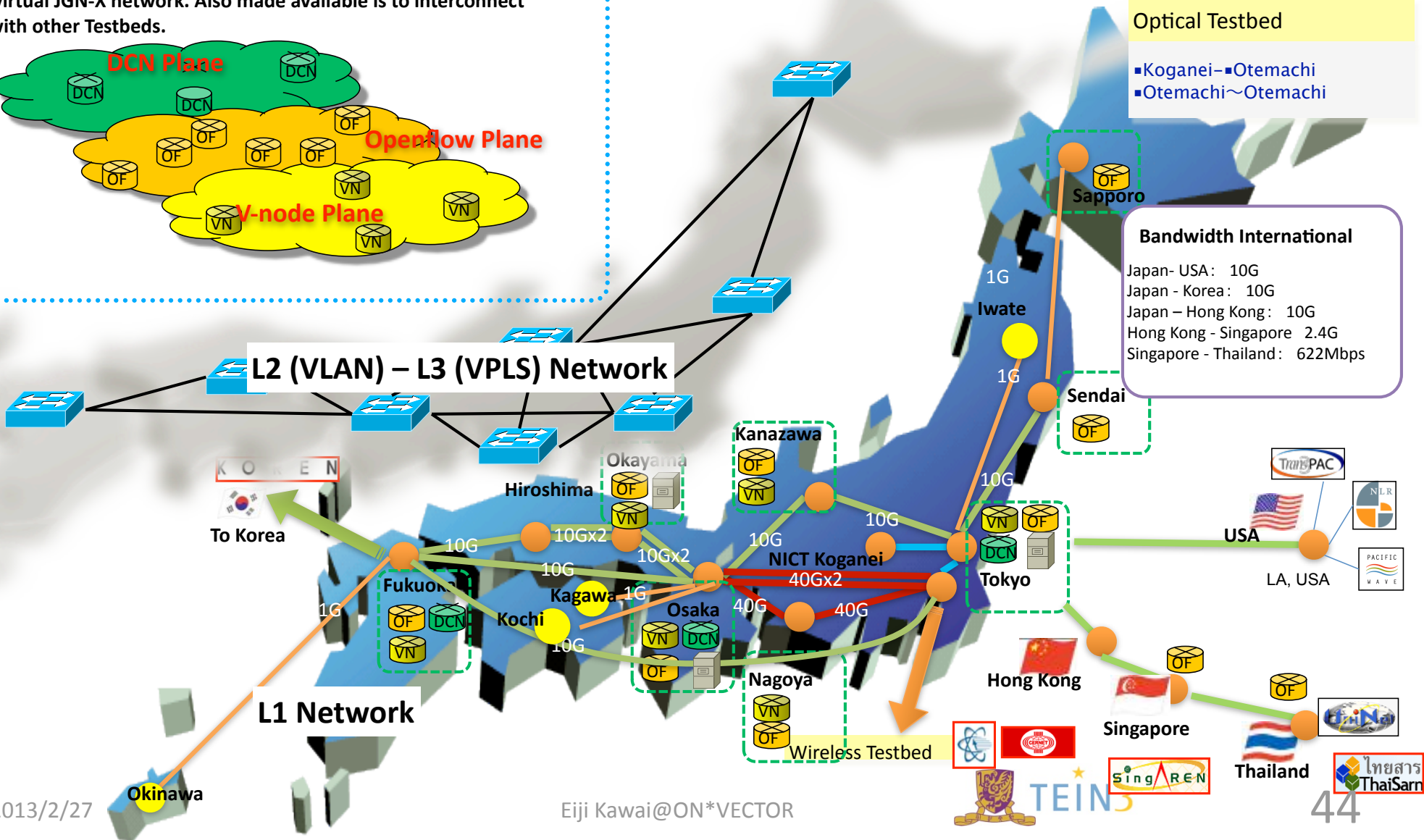
	40G		Virtual Node		DCN		StarBED
	10G		Openflow		Virtual Storage		
	1G						
	DF						

Optical Testbed

- Koganei~Otemachi
- Otemachi~Otemachi

Bandwidth International

- Japan- USA: 10G
- Japan - Korea: 10G
- Japan - Hong Kong: 10G
- Hong Kong - Singapore: 2.4G
- Singapore - Thailand: 622Mbps



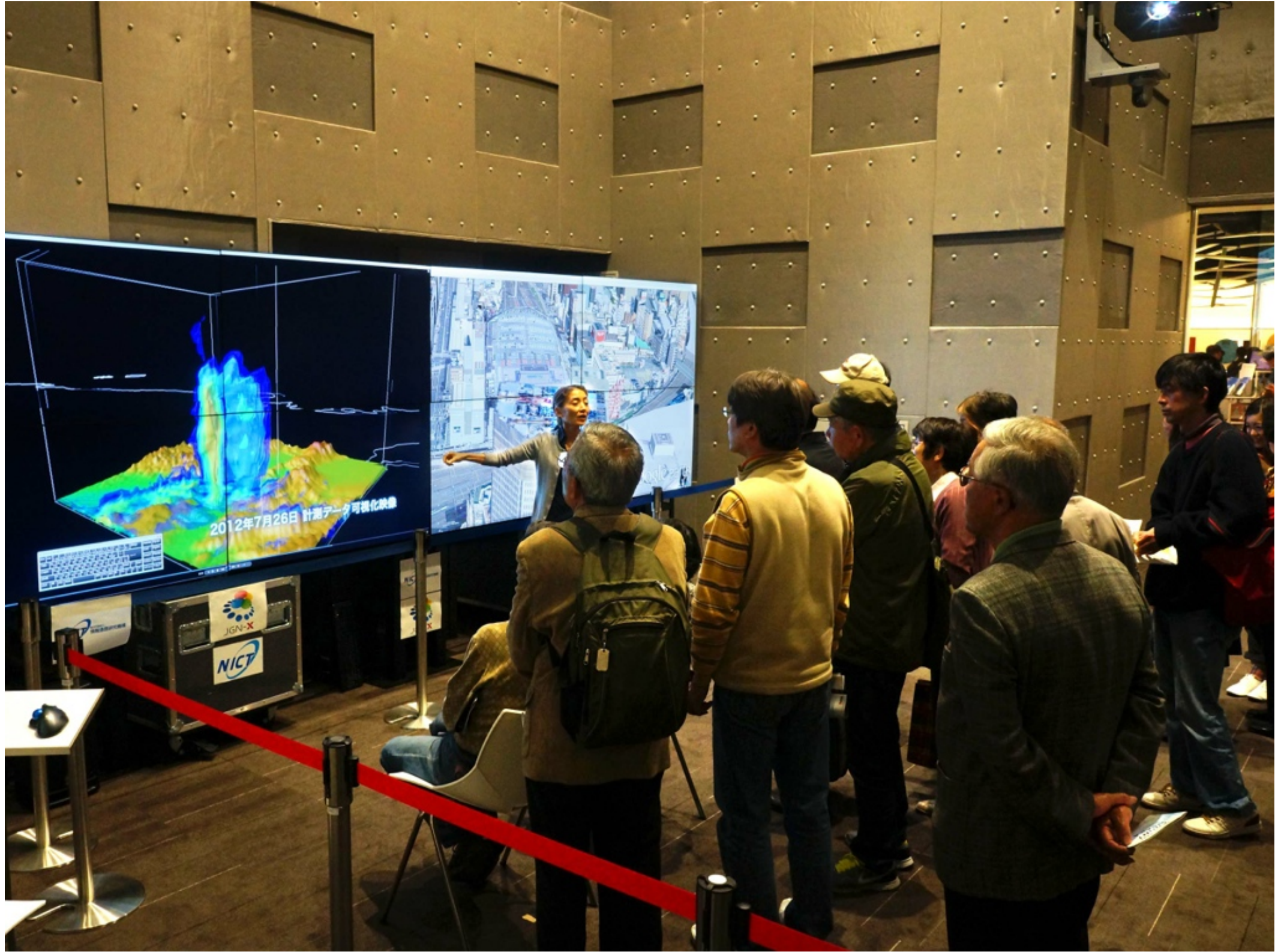
Active Studio(アクティブスタジオ)
プログラムスケジュール

4月26日(金)、27日(土)、28日(日)
高層ビル前面でみるNCTの最先端技術
上映時間 10:00~21:00
◎参加料
NCT研究員による説明や体験プログラムを行います。
主催 独立行政法人 情報通信研究機構 (NICT)

4月29日(月-祝)
Coba「スマイルゲーム」イノベーションラボ
「スマイル・アクティブ・ライブ!」
開催時間 ①13:00 ②15:00 ③17:00
◎参加料
先着50名 当日10:00より各回整理券配布
主催 イノラボ







umekita





Navi: Covise-Kinect Navigation Interface



UCSD
Osaka U
NICT
Kansai U

cave2 at EVL@UIC

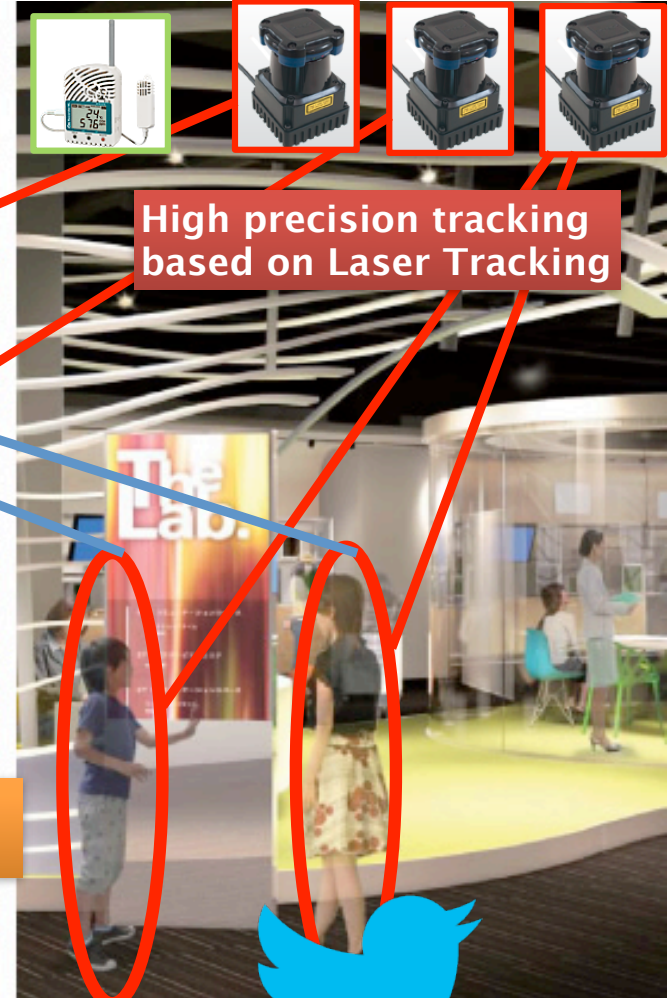
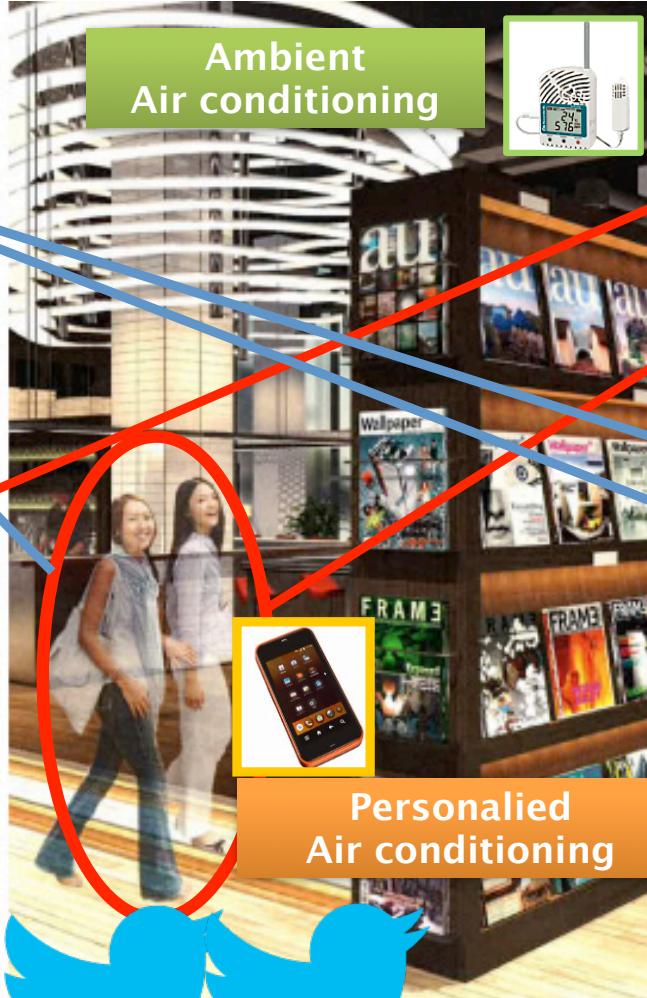
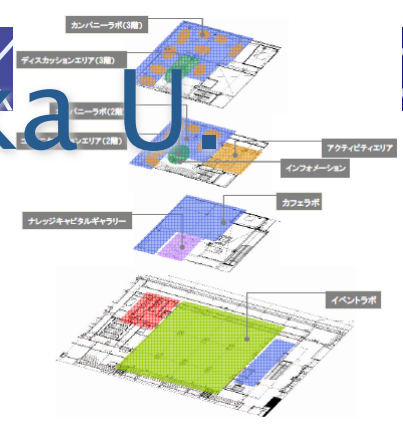


Collaborative Project with Osaka U.

CPS project

Realtime person tracking
in multiple floor

Personalized,
Comfortable and
Energy efficient air
conditioning



Collecting Tweets

Cyber Physical System

Collecting information from sensors,
analyzing information, and
Delivering information to right location and timing

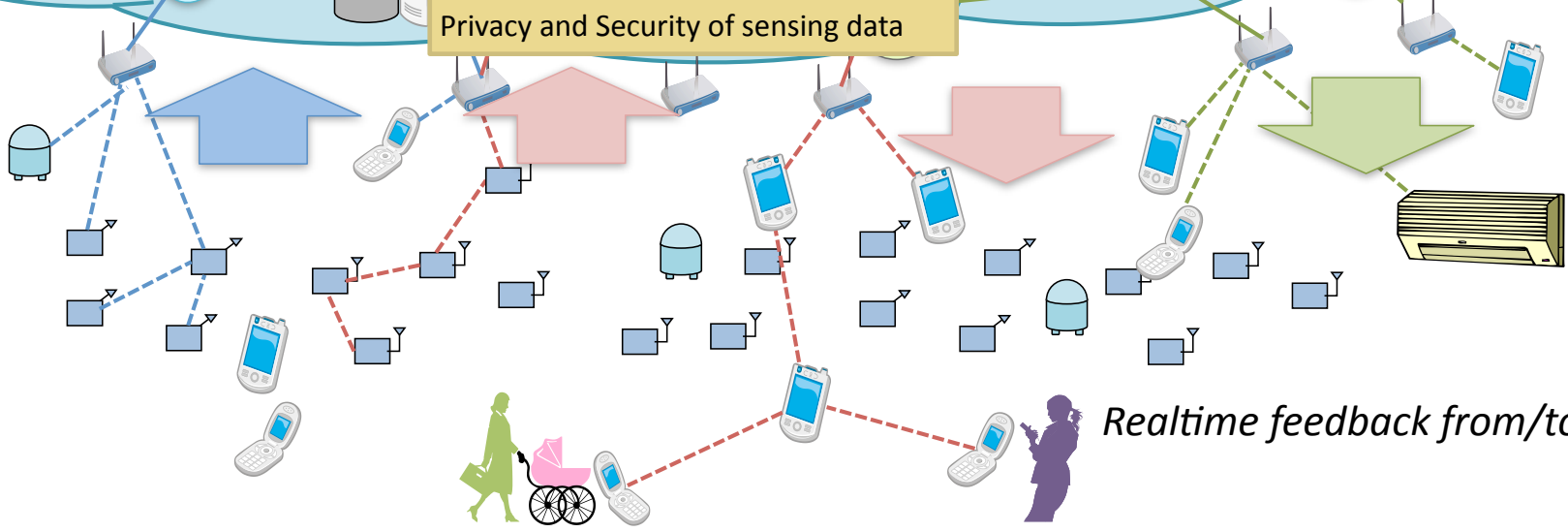
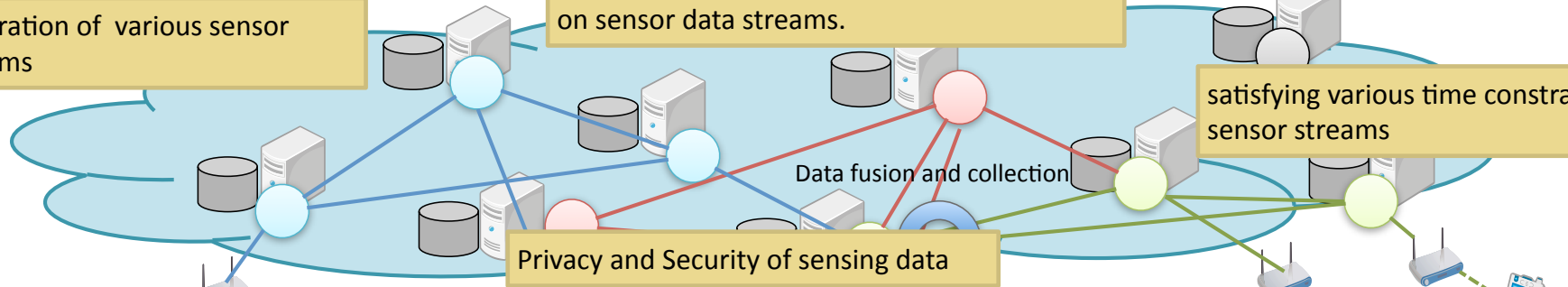
realtime monitoring of our environment



integration of various sensor streams

Distributed clouds for effective load balancing on sensor data streams.

satisfying various time constraints for sensor streams



device C (AC · LAN)
(2.4GHz transmit)



device B (AC · LAN) x 4



A1



C



B



B



C



device A1 (AC · LAN)
(429MHz transmit)



device A2 (AC) x 2
(429MHz transmission)



device A3 (battery)
(429MHz transmiss)

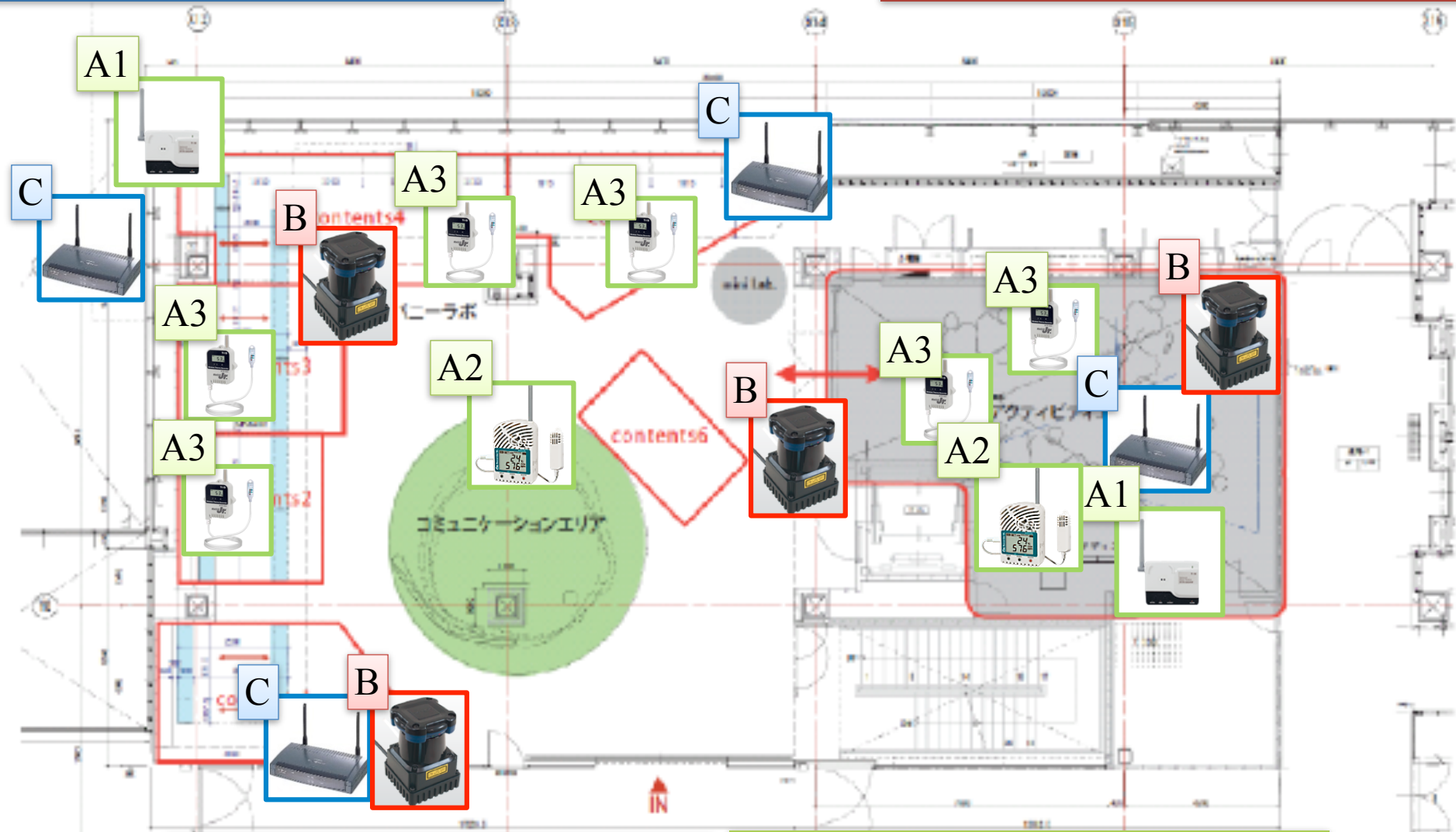


数

機器C (電源・LAN) x 4
(2.4GHz送受信機)



機器B (電源・LAN) x 4
(見通し要, 設置場所注意)



機器A1 (電源・LAN) x 4
(429MHz受信機)



機器A2 (電源要) x 2
(429MHz送信機)

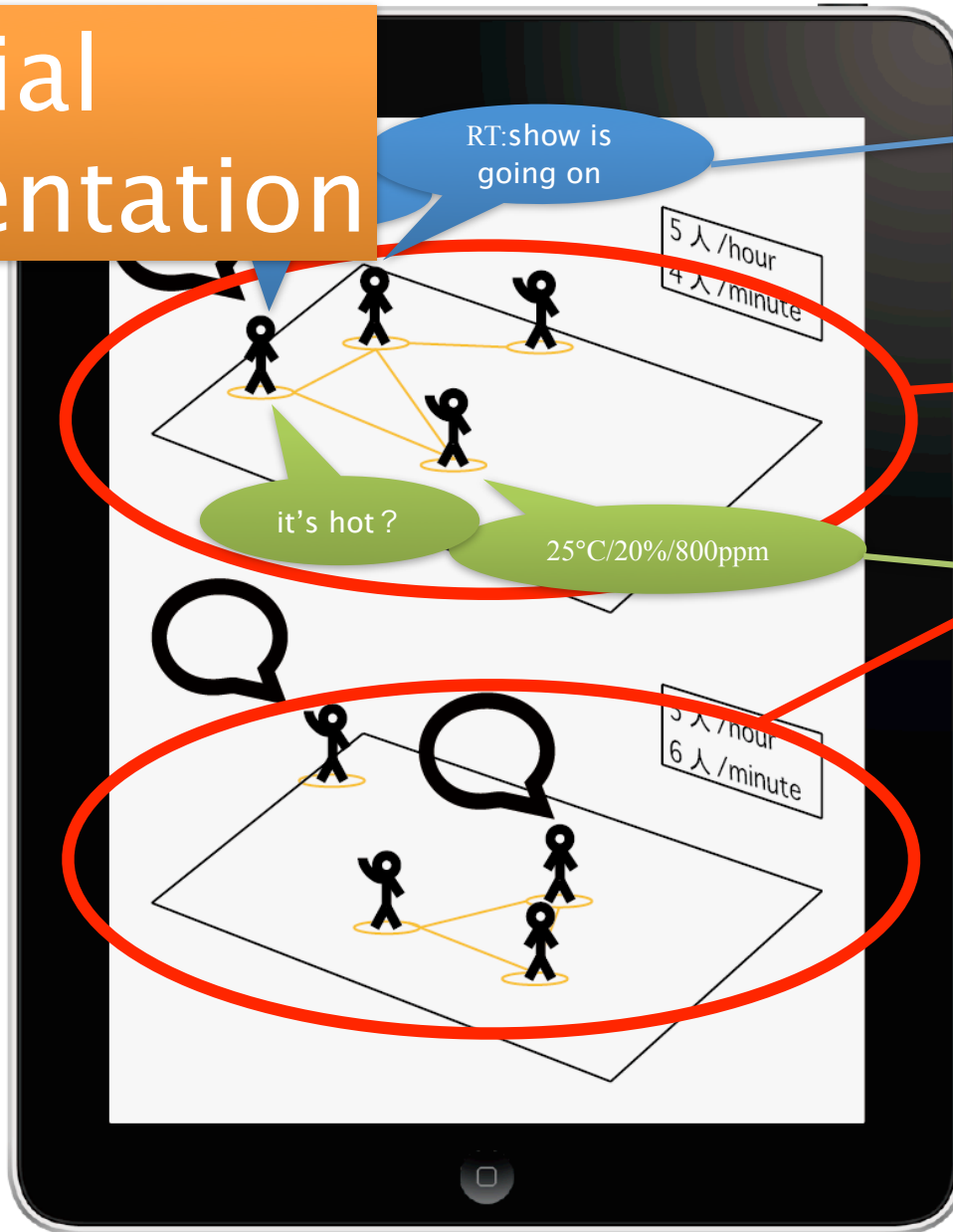


機器A3 (電池) x 多数
(429MHz送信機)



Client apps in the device (Tablet, mobile phone and signage)

virtial
orientation



Kimochi-navi
(tweet)

Hitonabi (location
based service)

Kuuki-navi
(temperature/moisture/
CO2)

new user
experience on
person(Hito),
emotion(Kimochi)
environment(Kuuki)

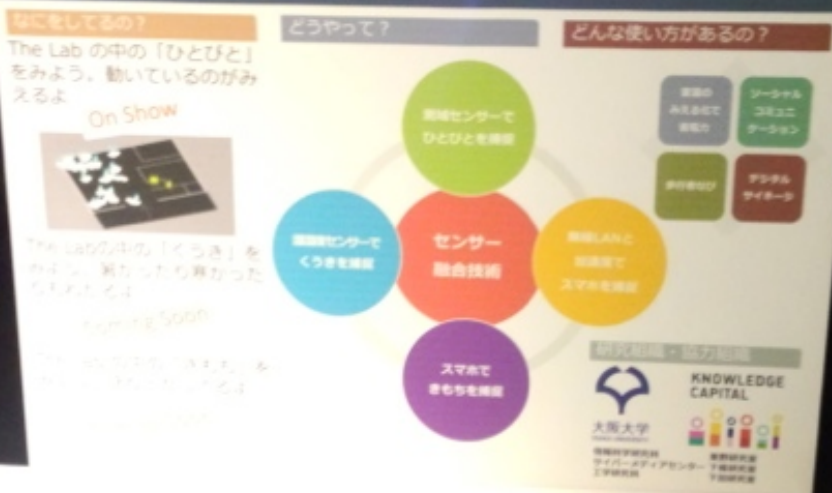


Lab OSAKA

ワークやスーパーコンピュータを使ったシミュレーションなど、わくわくする最新の技術が体験できます。
Experience exciting new technologies through fast networks and simulations possible by supercomputers.



ひとたび 共有空間における「ひと」「きもち」「くつき」の可視化 Visualizing People, Mind and Air Together



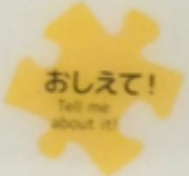


えー？なにそれ？
What's that?

なんか面白いそう！
Looks like fun!

わあ、びっくり
What's that?

みなさんの笑顔・驚き・感心。
The Lab. での好奇心が次の世界一を創る
大切な「ヒント」や「アイデア」となります。
展示しているコンテンツや技術について、
感想や意見を各社の担当者やコミュニケーターと
お話しください。お待ちしております。



Your smile, amazement and interest. Your curiosity
at The Lab will be the precious "hint" or "idea" to
create the world's next best thing.
Regarding the contents or technologies on display,
please share your impressions or opinions with the
representative or communicator of each company.

アクティブラボは第1階では大阪大学とナレッジキャピタルが共同で、みんなの位置情報や周りの温度、湿度、CO2の濃度を取得し、行動解析や快適性を検証する共同実験を行っています。
At Active Lab (2F, 3F), Osaka University and Knowledge Capital conduct a joint experiment for people's activity and comfort level analysis by gathering location information, temperature, humidity and CO2 levels of the area surrounding each participant.



KNOWLEDGE CAPITAL



Yomiuri News Paper

Summery

- Knowledge Capital amis at Innovation through participation of citizens into research and development.
- It is a big social experiment in terms of funding, feasibility, acceptability whether we could make an eco-system among academia, industry and citizen.
- But it is an open experiment welcoming your participation.

KNOWLEDGE CAPITAL

