

SBA
AT A
GLANCE



CONNECTED WORLD

ALL CITIZENS

ALL BUILDINGS

ALL VEHICLES

ALL TERRITORY, EQUIPMENT & INFRASTRUCTURE



VISION

CONTRIBUTING TO URBAN ENVIRONMENTAL TRANSITION BY
ACCELERATING IMPACT OF DIGITAL TRANSITION IN BUILDINGS & CITIES

Environmental Transition



X

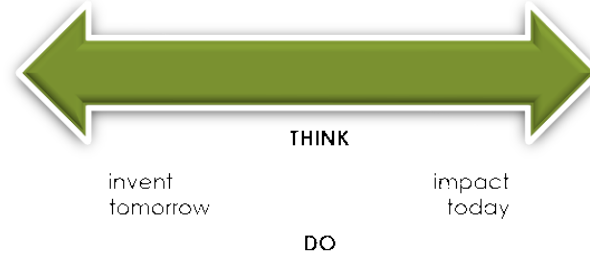
Digital Transition



“The development of new digitally enhanced services in buildings and cities will become possible when traditional silo approaches are overcome”

MISSION

THINK TANK



DO TANK



→ **imagine & design** the way forward for Sustainable Urban Development, by meeting the challenges of :

- Digital transformation
- Energy transition
- Sustainable business models
- Service orientated, user centric approach for smart buildings & smart cities

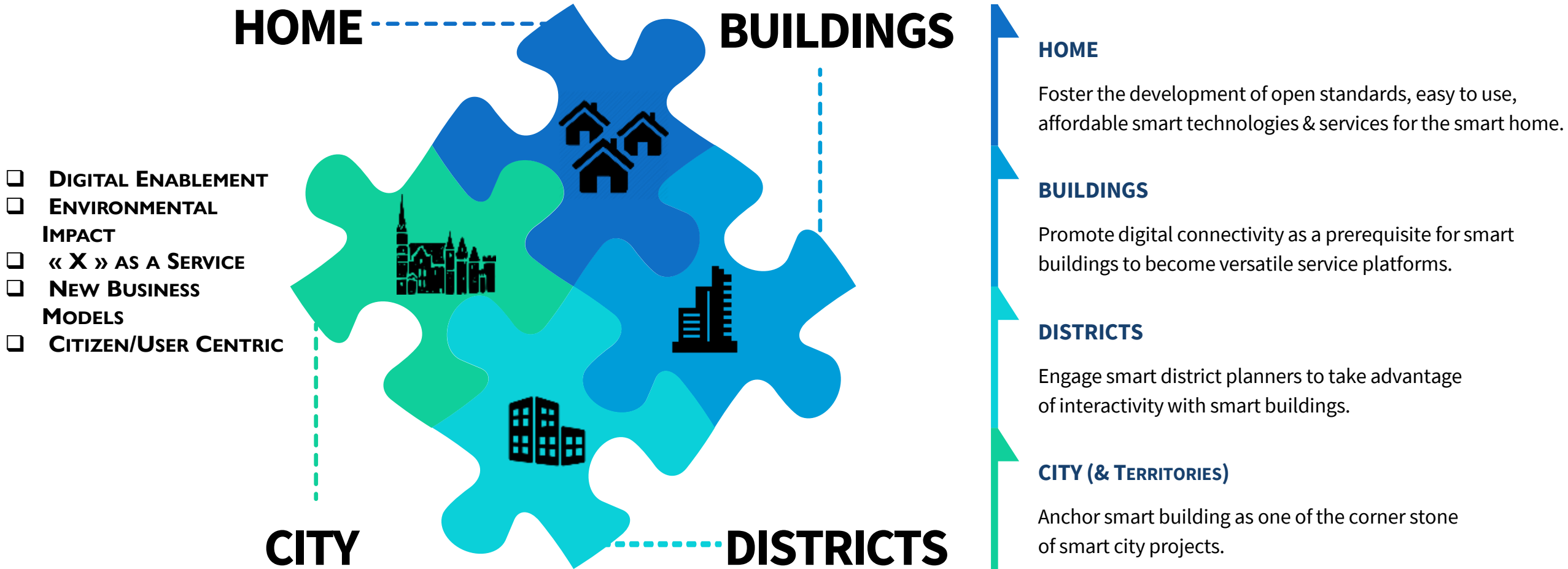
→ **support stakeholders** involved in these transitions

→ **foster the development of new ecosystems** leveraging innovation and new services in the context of sustainable development business models.

→ **help to establish a Smart building & Smart City sector of excellence** capable of disseminating all around the world

OUR SCOPE & GOAL

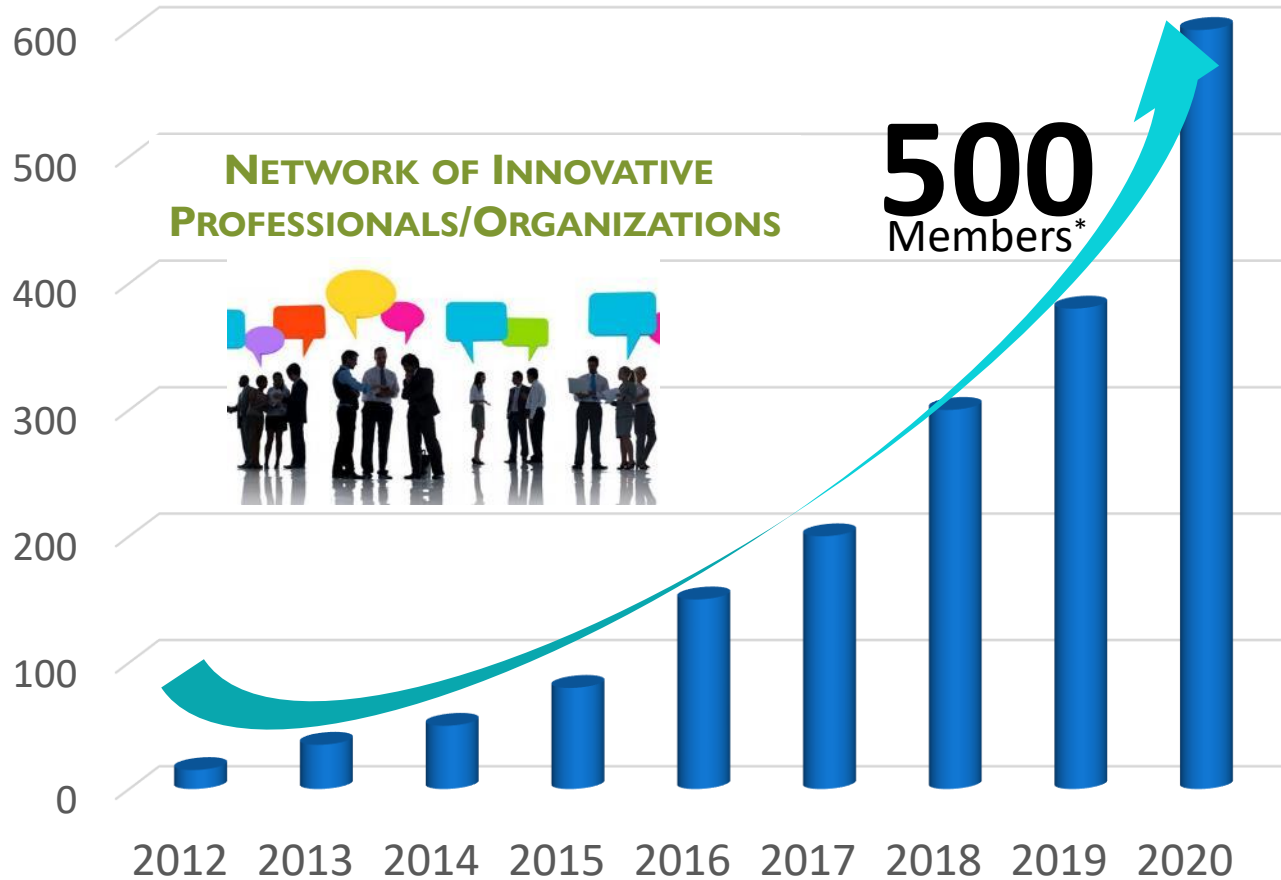
FROM HOMES TO CITIES & TERRITORIES



WHO WE ARE :

MEMBERS

COLLECTIVE INTELLIGENCE, TRANSVERSALITY, DIVERSITY OF STAKEHOLDERS



- CITIES & LOCAL AUTHORITIES
- DEVELOPERS, REAL ESTATE OWNERS, SOCIAL LANDLORDS
- ARCHITECTS, ENGINEERING OFFICES, CONSULTANTS
- INSTALLERS, INTEGRATORS
- EQUIPMENT MANUFACTURERS, SOLUTION PROVIDERS
- UTILITIES
- SERVICE PROVIDERS
- TELECOM, NETWORKS, IT
- FINANCIAL INDUSTRY (BANK & INSURANCE)
- STARTUPS
- TRAINING ORGANIZATIONS, UNIVERSITIES
- INDUSTRY ASSOCIATIONS
- ...

* Members as of April 2020

WHO WE ARE :

SBA FRANCE HONORARY MEMBERS



... + 450 OTHER ORGANIZATIONS
& ENTERPRISES

WHO WE ARE :

ORGANIZATION

ADVISORY BOARD

**PRESIDENT OF THE
ADVISORY BOARD**
M. DAUMAS
ENGIE SOLUTIONS



EXECUTIVE COMMITTEE

PRESIDENT



E. FRANÇOIS
ENOCEAN

E. ETIENNE-DENOY
GREEN SOLUCE

VP SMART CITY



S. MEUNIER
ABB

VP SMART BUILDING



FX. JEULAND
NT Conseil

VP SMART HOME



O. GRESLE
ENGIE Solutions

GENERAL SECRETARY



TREASURER



V. DE LAJARTE
PARTAGER
LA VILLE

DEPUTY VP-CITY



C. MOULIN
CERTIVEA

DEPUTY VP-BUILDING



B. FIQUET
ICADE

DEPUTY VP-HOME



C. ROZIER
URBAN
PRACTICES

DEPUTY VP- G.S.



P. METZENTHIN
G-ACTIV

MANAGEMENT OFFICE

EXECUTIVE OFFICER

P. DE CARNÉ



INTERNATIONAL DEVELOPMENT

M. CLAUDEL



CHIEF PROGRAM OFFICER

A. KERGOAT



MARCOM MANAGER

D. BRIQUET



OFFICE MANAGER

M. ROUANET



BOARD OF DIRECTORS

ANGELO BLOT, MSH LONO
ROMAIN COURRIER, NEODOMUS
FRANÇOIS-XAVIER JEULAND, NT CONSEIL
VALENTINE DE LAJARTE, PARTAGER LA VILLE
PHILIPPE METZENTHIN, G-ACTIV

PIERRE-NICOLAS CLERE, CONNECTING TECHNOLOGY
ELLA ETIENNE-DENOY, GREEN SOLUCE
FRANK FISCHER, ADEUNIS
GODEFROY JORDAN, SMARTHAB
PATRICK NOSSANT, CERTIVEA

PHILIPPE BONDUELLE, DECELECT
ALEXANDRE CHAVEROT, AVIDSEN
HENRI LASSEIGNE, ASCAUDIT
JÉRÔME MAYET, SETEC
SYLVAIN RISS, BG 21

PHILIPPE DURAND, BUREAU VERITAS
BENJAMIN FIQUET, ICADE
ANNE-FRANÇOISE HAYMAN, ARTELIA
SÉBASTIEN MEUNIER, ABB
STÉPHANIE VONDIÈRE, GA SMART BUILDING

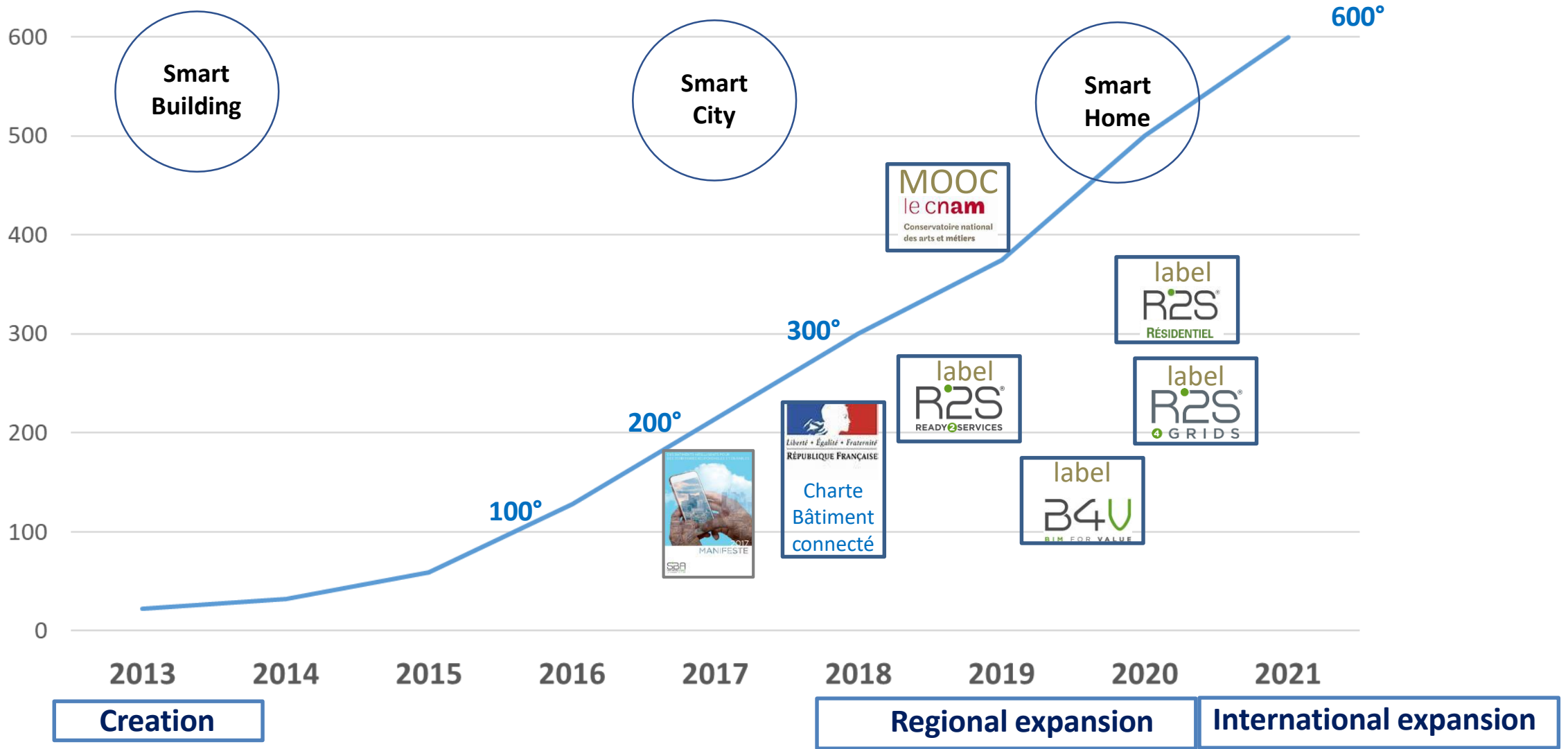
EMMANUEL BALLANDRAS, LEGRAND
FRANÇOIS DESGARDIN, NEXITY
CHRISTELLE DUVERGER, VINCI FACILITIES
OLIVIER GRESLE, ENGIE SOLUTIONS
ISABELLE MATHÉ, ORANGE

CHRISTOPHE COLINET, BORDEAUX METROPOLE
DELPHINE EYRAUD, GIMELEC
FRANÇOIS LOCH, AFPA
ANNE-SOPHIE PERRISSIN, IGNES
STÉPHANIE TUCOULET, ANITEC

CHRISTELLE AROULE, SCHNEIDER ELECTRIC
LAURENT BERNARD, SIBANEL
DORIS BIRKHOFER, SIEMENS
KEVIN CARDONA, BNP PARIBAS REAL ESTATE
DAVID DESABLENCE, VINCI ENERGIE

ANNE DEVERNOIS, BOUYGUES ENERGIE SERVICES
CINDY DEVILLERS-COURSEAUX, EDF
EMMANUEL FRANÇOIS, ENOCEAN
BENOIT GRIGAUT, ENGIE SOLUTIONS
PAUL RAAD, WIT

KEY MILESTONES



WHAT WE DO :

EVENTS, TRADE FAIRS & PUBLIC RELATIONS

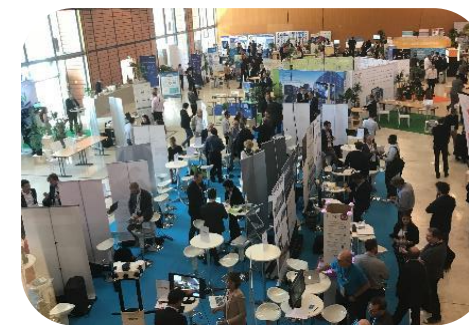
Organizing
Thematic Conferences



Gathering Members for
Network Events & Sharing Experiences



Founding Partner of SB4SC* Universities
** Smart Buildings for Smart Cities*



Promoting Innovation at
major trade fairs
through Village by SBA



Offering Speaking Opportunities
for Innovators & Thought Leaders



Sharing new ideas & vision
In the scope of Smart Buildings for Smart Cities



WHAT WE DO :

SBA PUBLICATIONS & THEMA GUIDES

SMART TERRITORIES



SMART SOCIAL HOUSING MOBILITY SERVICES



SMART PARKING



SAFE & SECURE TERRITORY



SMART LIGHTING



SMART HOSPITAL



SBA MANIFESTO



CONNECTED BUILDING



READY2SERVICE FRAMEWORK

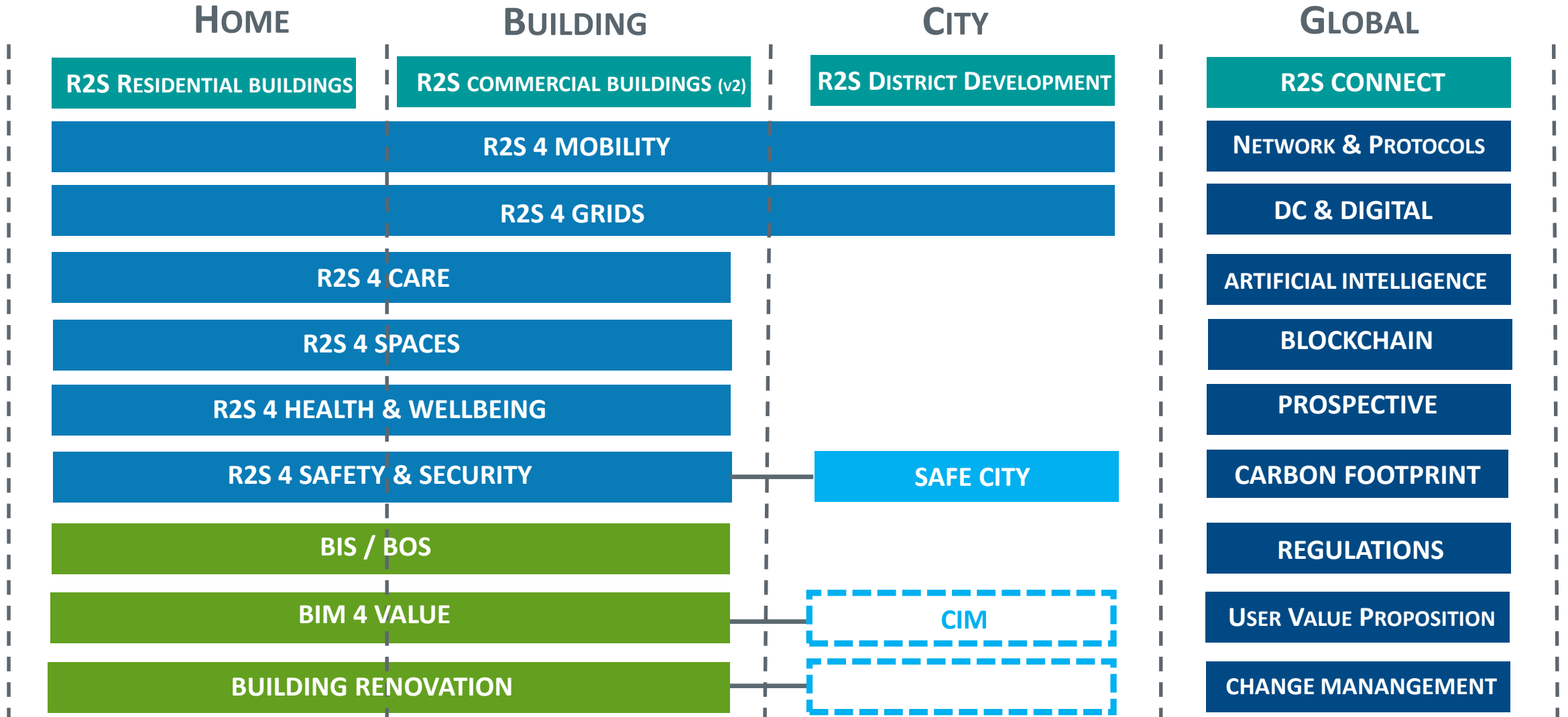


BIM4VALUE FRAMEWORK

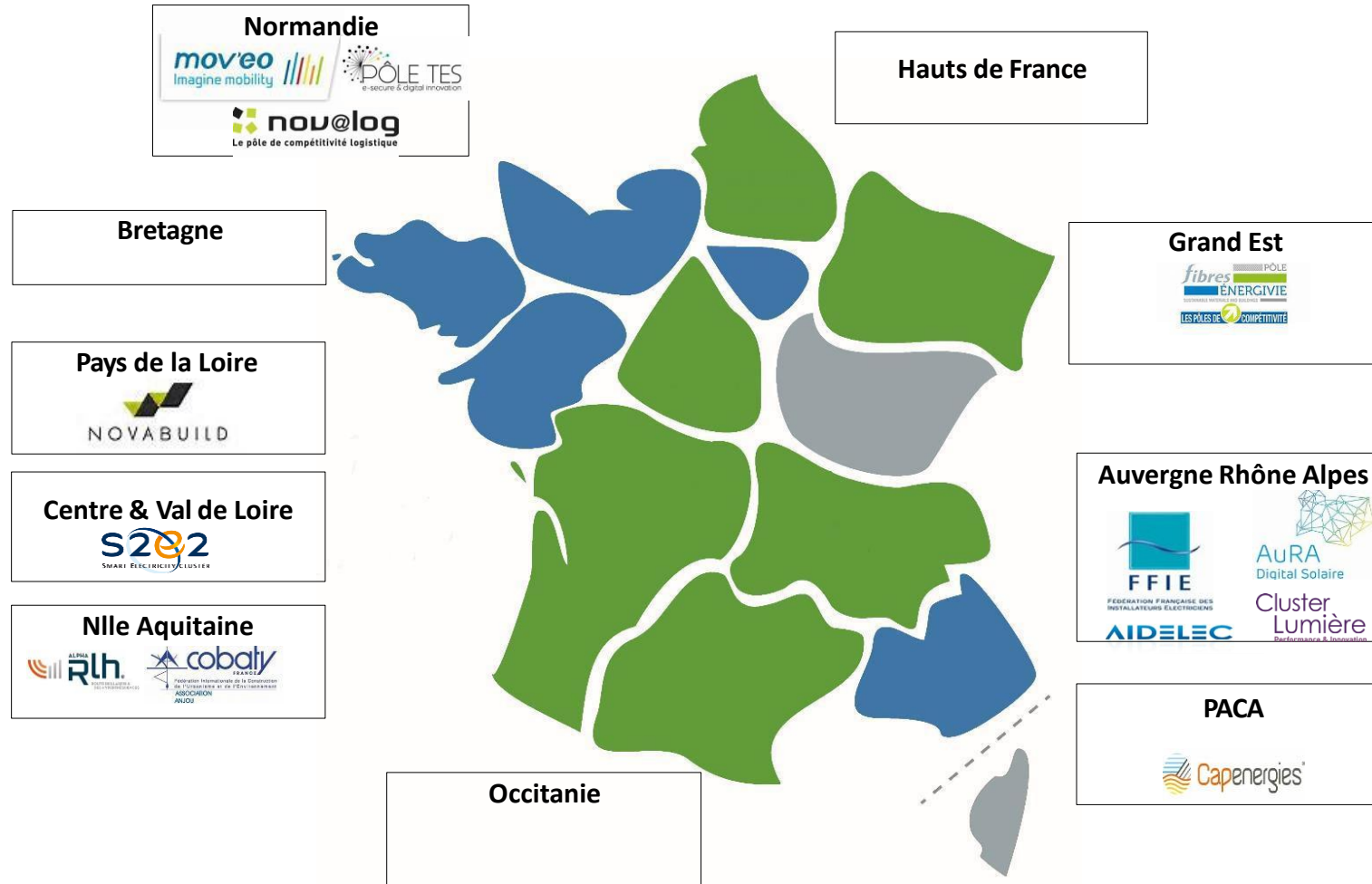


WHAT WE DO :

ACTIVE WORK GROUPS

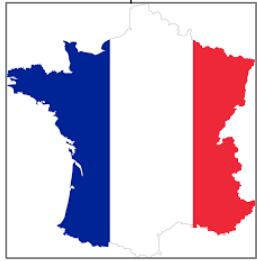


SBA REGIONAL COVERAGE



OUR NEXT STEP : GOING INTERNATIONAL

**OPENING SBA
INTERNATIONAL HQ
IN BRUSSELS IN 2020**



FRANCE

CREATED
2012



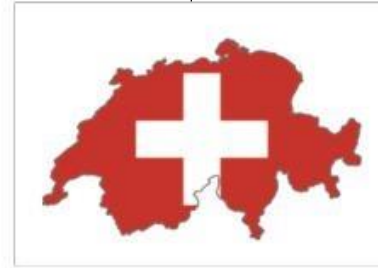
LUXEMBOURG

PLANNED OPENING
2020



BELGIUM

PLANNED OPENING
2020



SWITZERLAND

PLANNED OPENING
2020

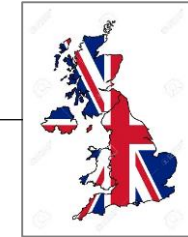
Under discussion ...



GERMANY



ITALY



UK

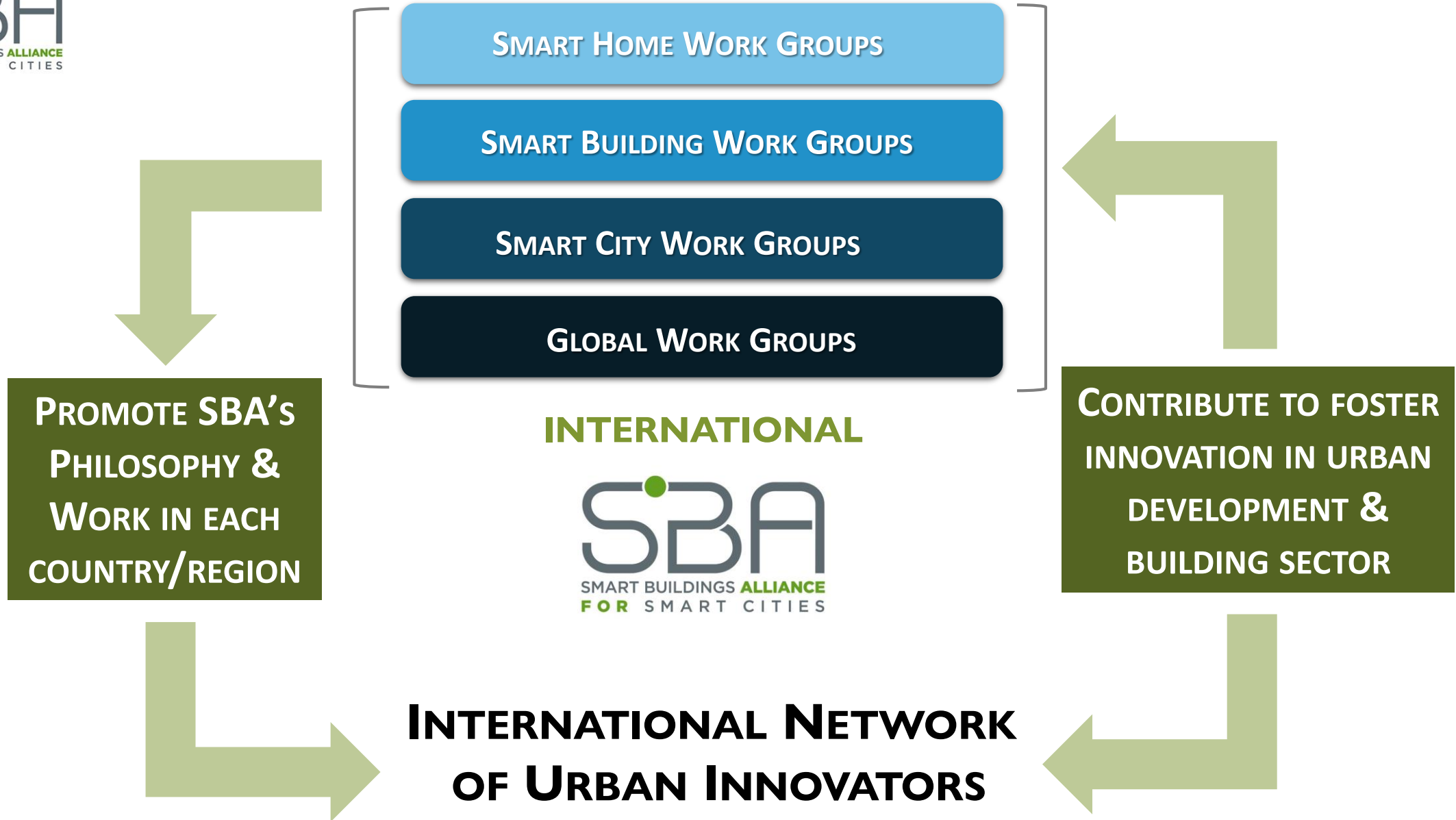


USA



CHINA

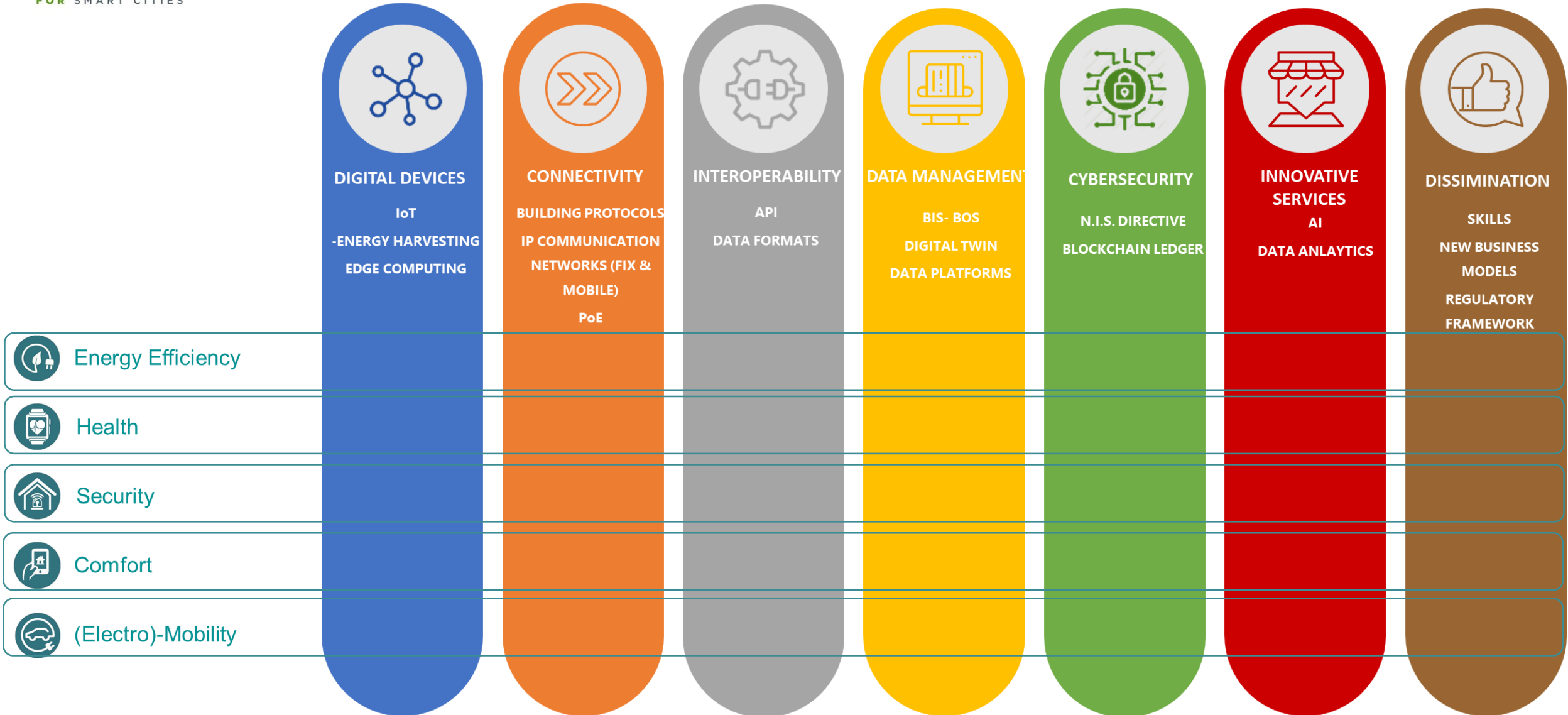
- Tunisia / Morocco / Algeria
- Nordics
- Canada
- and more ...



SBA WORK THEMES



STRATEGIC DOMAINS & FIELDS OF INTEREST



CITIZEN CENTRIC SMART CITIES

Activities : business, retail, education, health...



Buildings : residential, work spaces, commercial activities, public services ...



Mobility : services, transportation, traffic, parking



Energy, fluids, waste ...



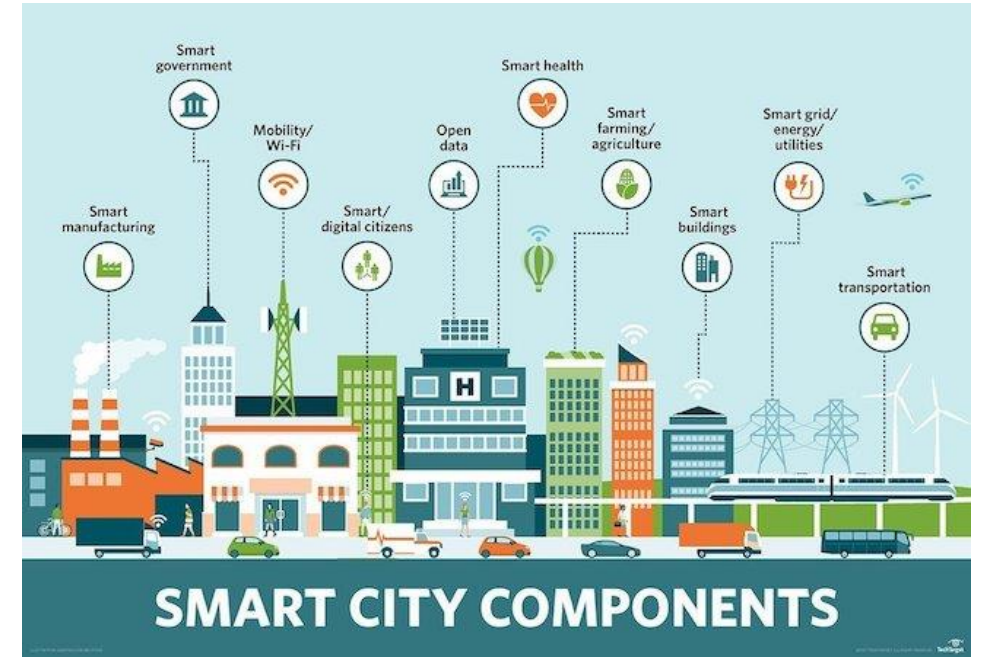
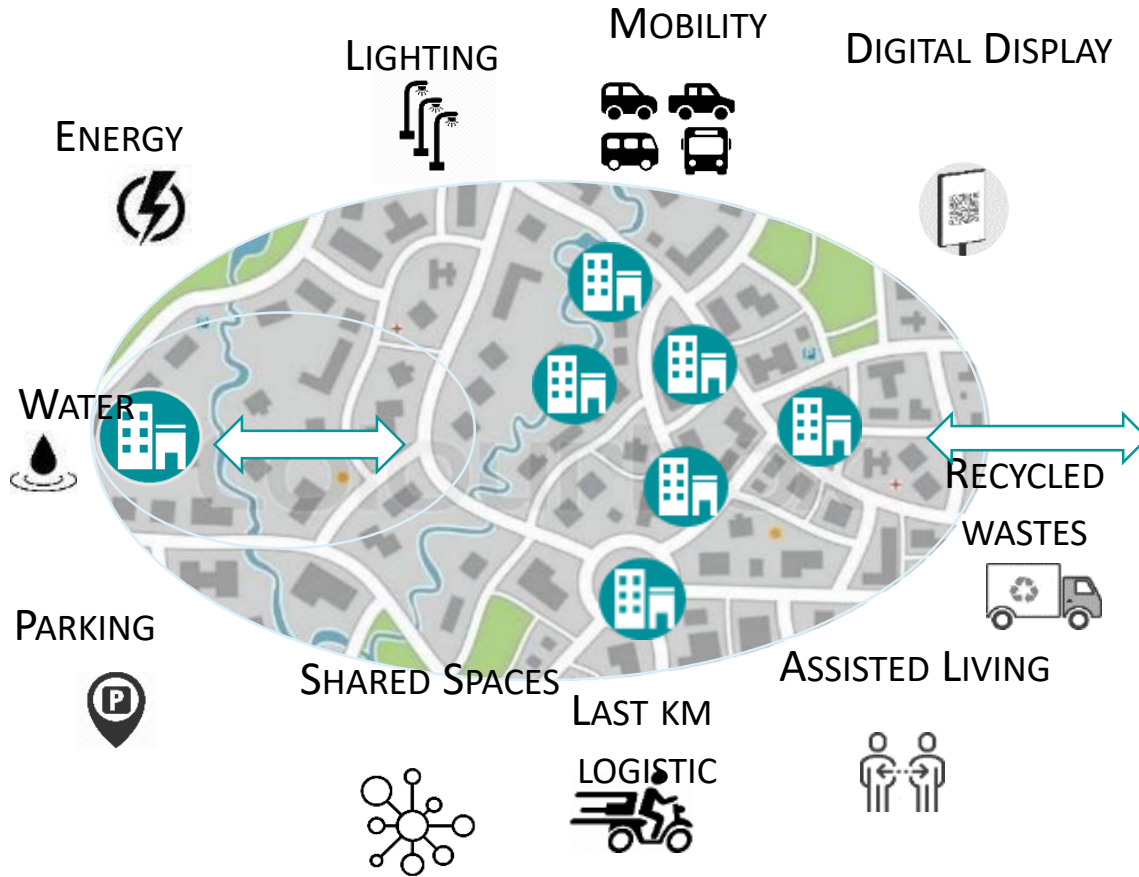
Public infrastructures : networks, lighting, security...



SMART CITY – SMART CITIZENS

FROM SMART BUILDING TO SMART TERRITORIES

A QUEST FOR SERVICES CONTINUUM



Source: <https://internetofthingsagenda.techtarget.com/>

BUILDINGS TO SHARE MANY RESOURCES WITH SMART CITY

SMART CITY STARTS WITH SMART BUILDINGS

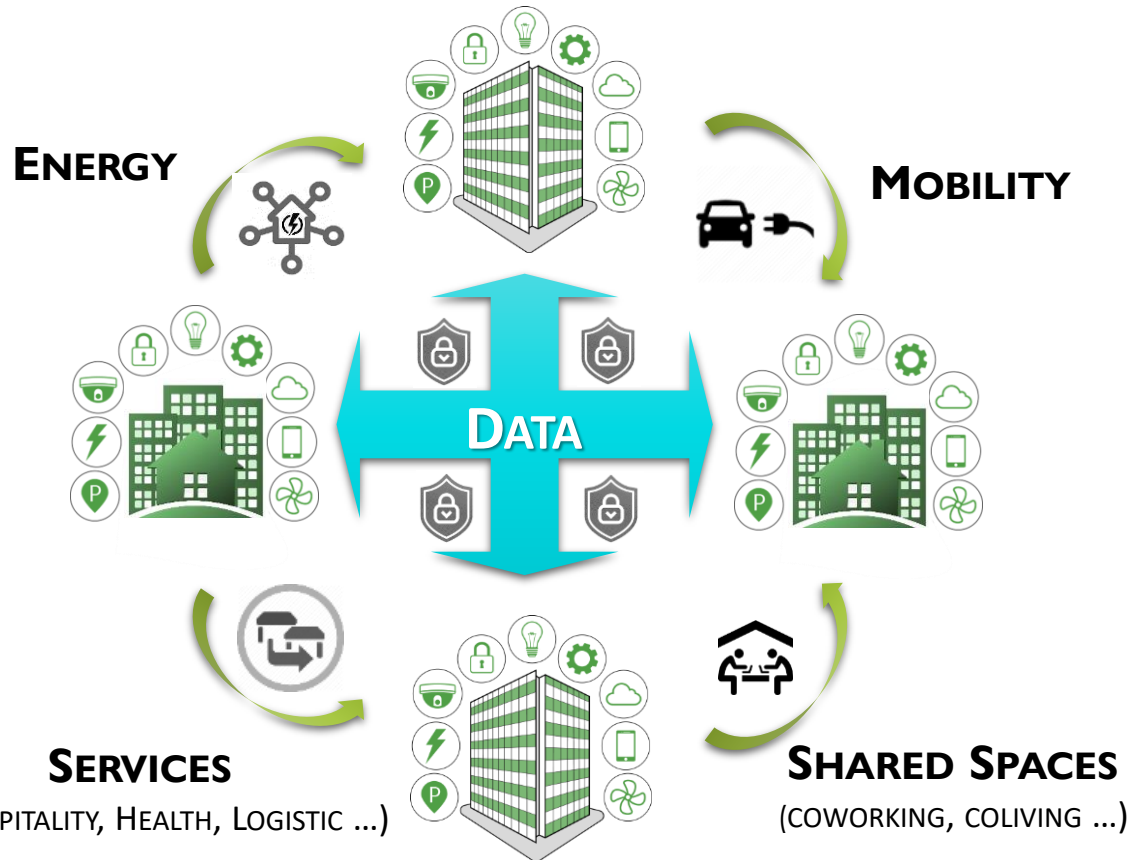
- ✓ Smart Buildings are the 1st piece of the puzzle

SMART CITY : A CONTINUITY OF THE SMART BUILDINGS

- ✓ Continuity of services for user from Smart Buildings to Smart City
- ✓ Towards 3D Territories (Digital, Decarbonate, Decentralized)

SMART BUILDINGS / SMART CITY SHARE COMMON OBJECTIVES

- ✓ More services closer to the citizens / users
- ✓ Accessible for all
- ✓ Increased well being
- ✓ Sustainable
- ✓ Safer



COMMERCIAL BUILDINGS

R2S FOR COMMERCIAL BUILDINGS



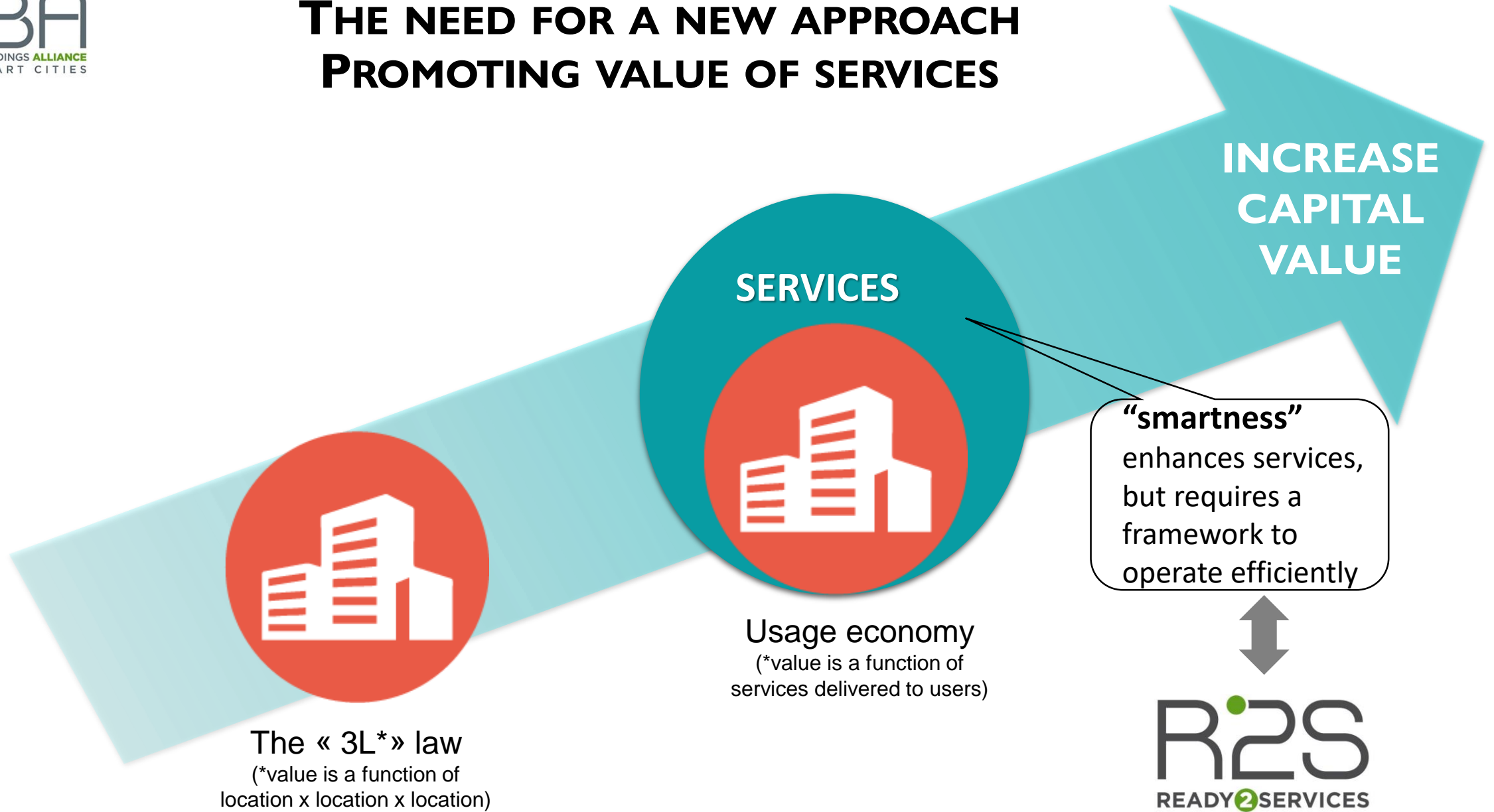
R2S FOR RESIDENTIAL BUILDINGS



R2S FOR DISTRICT DEVELOPMENT



THE NEED FOR A NEW APPROACH PROMOTING VALUE OF SERVICES



PROVIDE MORE SERVICES

OPTIMIZE OPERATIONS

IMPROVE FLEXIBILITY OF USAGES

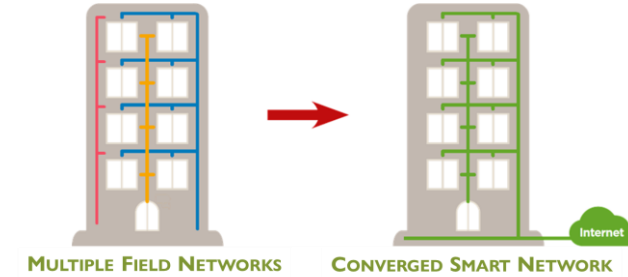
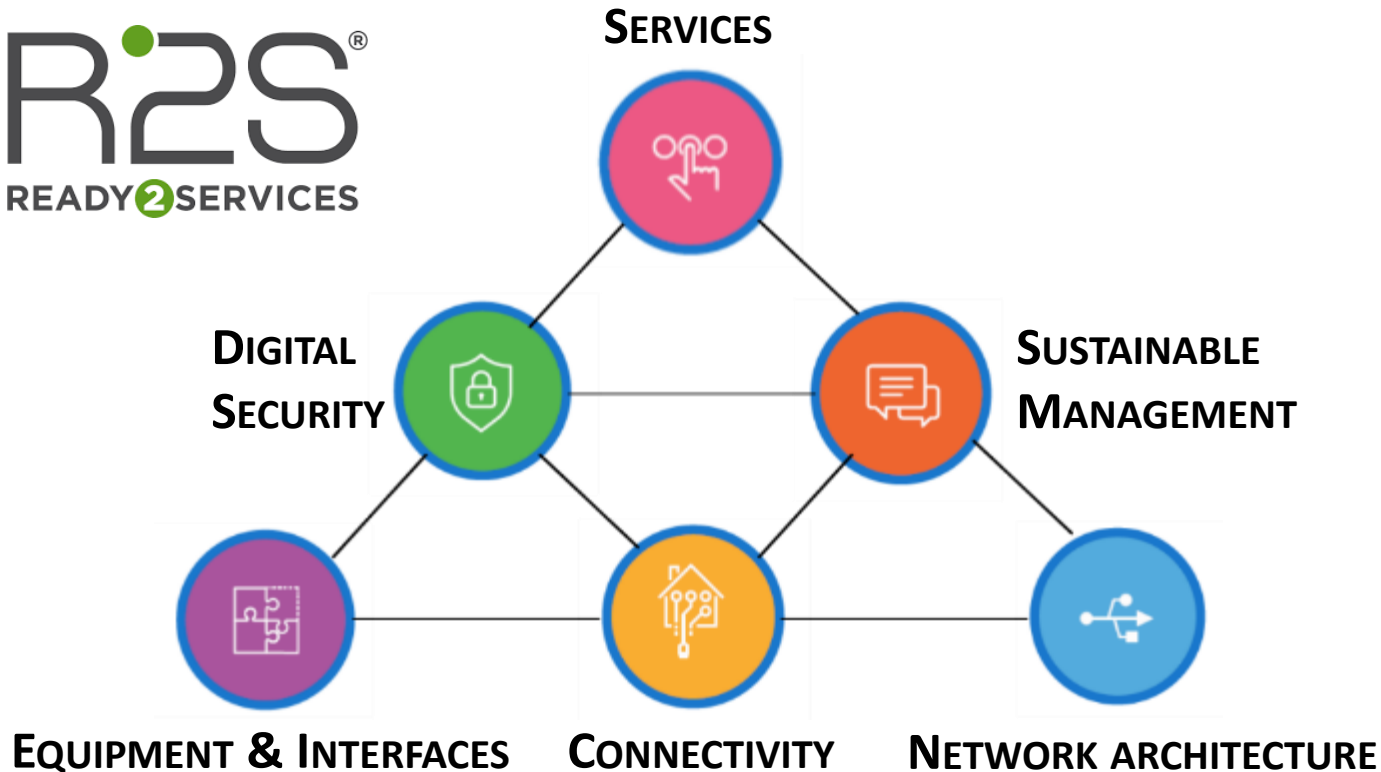


INCREASE PROPERTY VALUE / ATTRACTIVENESS

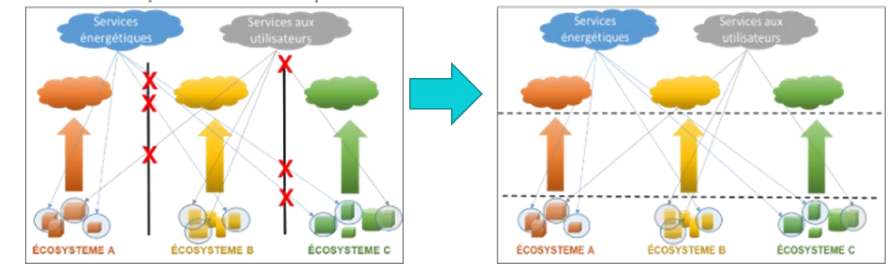
GENERAL FRAMEWORK FOR BUILDING CONNECTIVITY AND BEYOND

CONVERGED SMART NETWORK FOR THE BUILDING BASED ON ETHERNET – IP
THE INFRASTRUCTURE OF THE BUILDING'S 4TH FLUID (DATA)

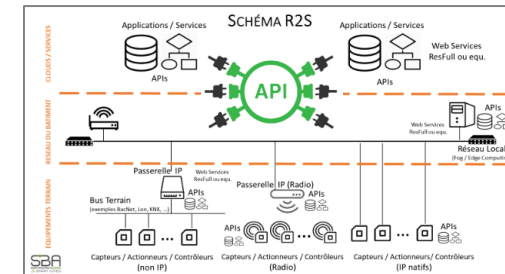
R2S[®]
READY 2 SERVICES



MODULAR ARCHITECTURE BASED ON 3 INDEPENDENT LAYERS
SILO MODEL vs **3 INDEPENDENT LAYER MODEL**



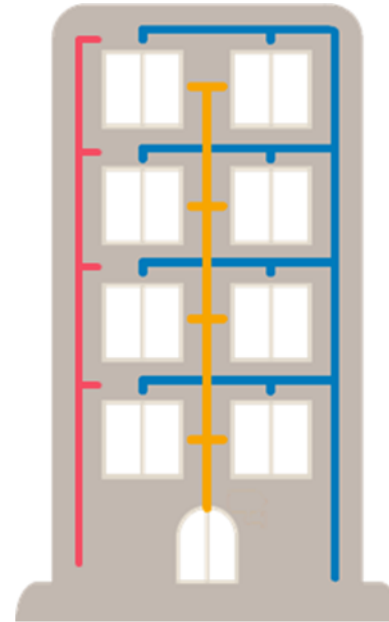
OPEN ACCESS TO DATA AND INTEROPERABILITY OF SYSTEMS



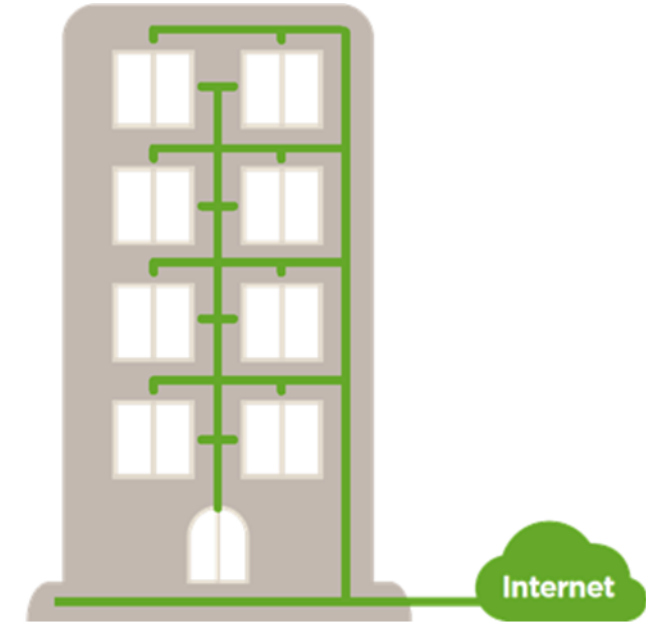
CONVERGED SMART NETWORK FOR THE BUILDING BASED ON ETHERNET - IP

THIS IS THE INFRASTRUCTURE OF THE BUILDING'S 4TH FLUID (DATA) ...

based on a standard and universal data transport protocol Ethernet – IP, this infrastructure includes, wired or wireless connectivity for the transportation of data, as well as network management systems, routing and logical organization of data flows and network services for the building.



MULTIPLE FIELD NETWORKS



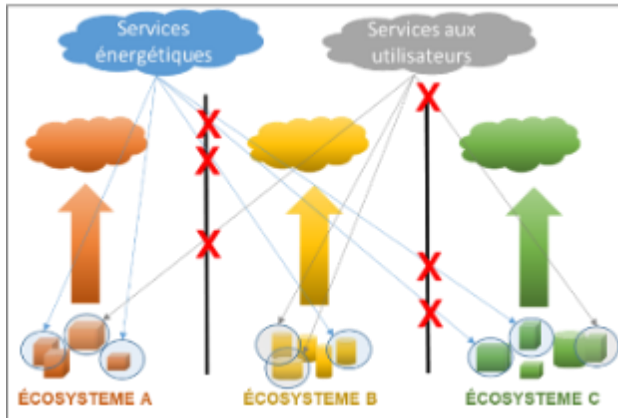
CONVERGED SMART NETWORK

MODULAR ARCHITECTURE BASED ON 3 INDEPENDENT LAYERS

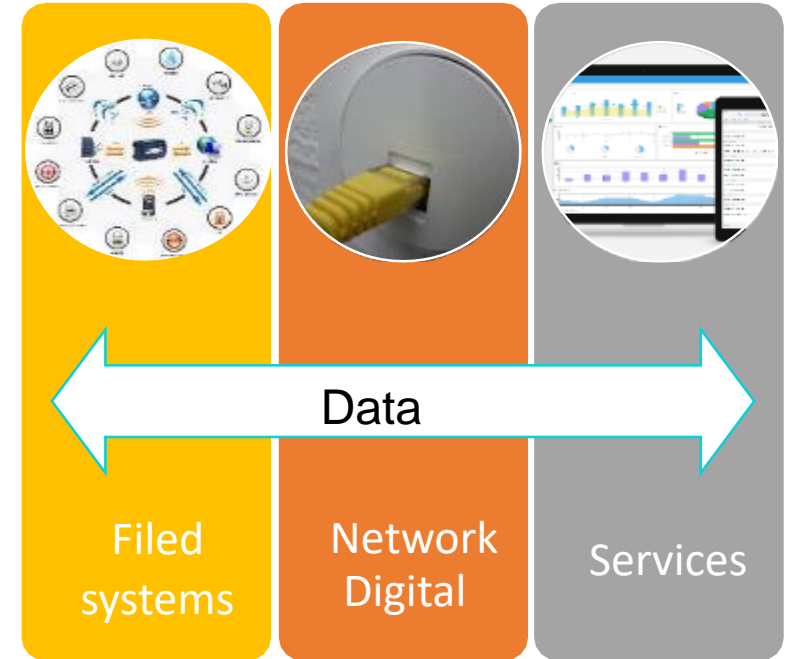
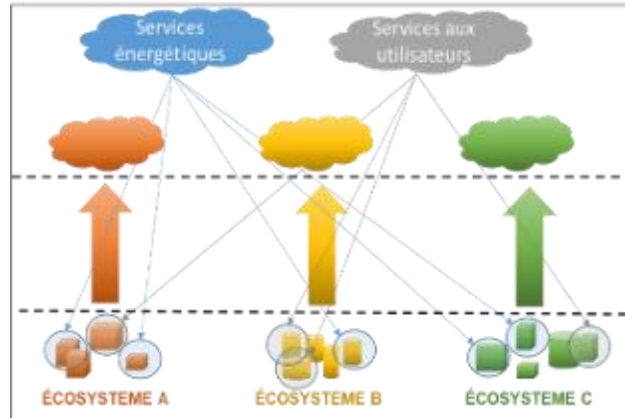
Each technical layer : Field systems, Network/Digital infrastructure & Service, should be able to be changed without modifying the others two ...

a hardware ecosystem does not impose a proprietary service or a dedicated network/digital infrastructure and vice versa

SILO MODEL



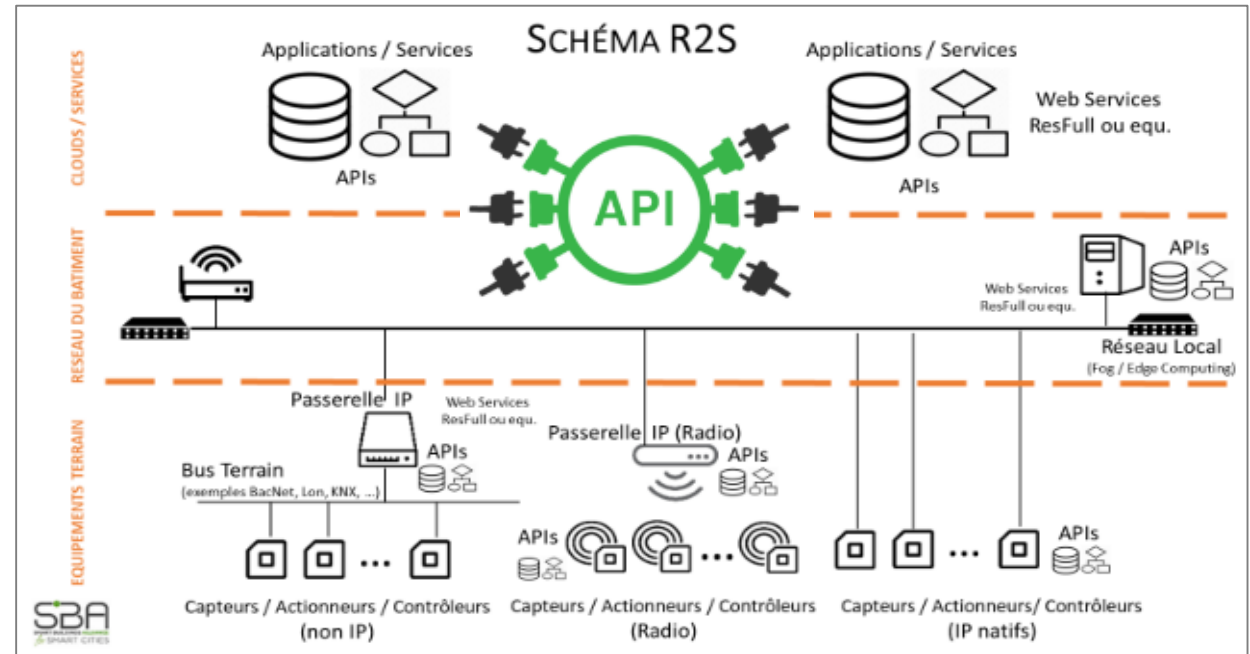
3 INDEPENDENT LAYER MODEL



OPEN ACCESS TO DATA AND INTEROPERABILITY OF SYSTEMS

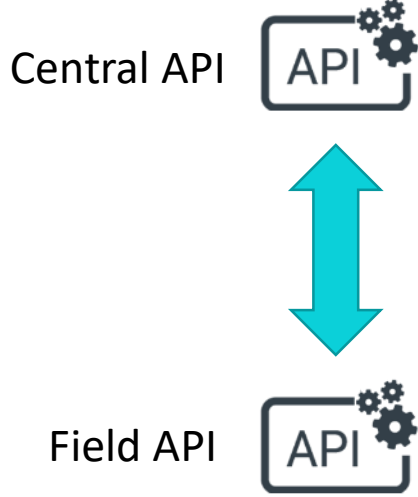
USE OPEN API (APPLICATION PROGRAMMING INTERFACES) TO ALLOW EASY ACCESS TO DATA ...

produced and / or used by the connected devices and related services, whether the services are available locally and / or through the cloud. Ensure existence of documentation and licenses of use are available and accessible to third parties.

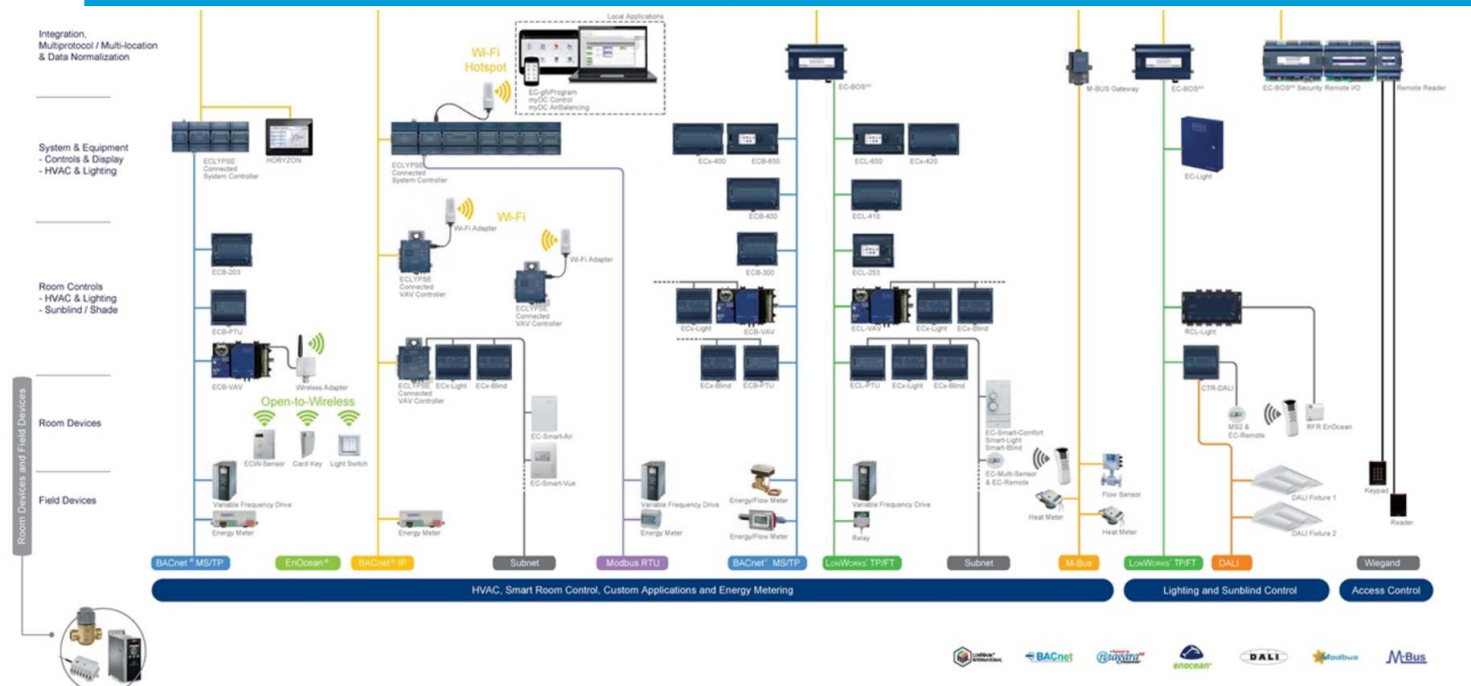


API
Documentation &
user licences

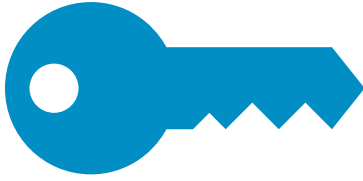
SMART SERVICES



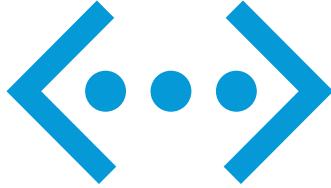
Building Smart Network (Ethernet-IP)



API GUIDELINES



Authentication



Access to API



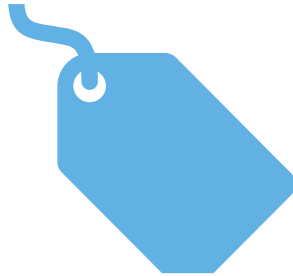
API Formats



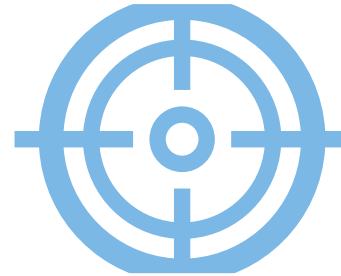
API
Documentation



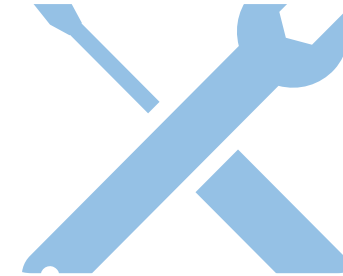
Equipment
Discovery



Equipment
Identification



Equipment
Localization



Equipment
Configuration

A trusted framework for digital security and data protection

Making accessible and controllable building functions locally or remotely via digital tools, requires to consider systems (equipment, networks, services, data) security policies , as well as data protection procedures (data administration policy, new European regulation on data protection : GDPR ...).



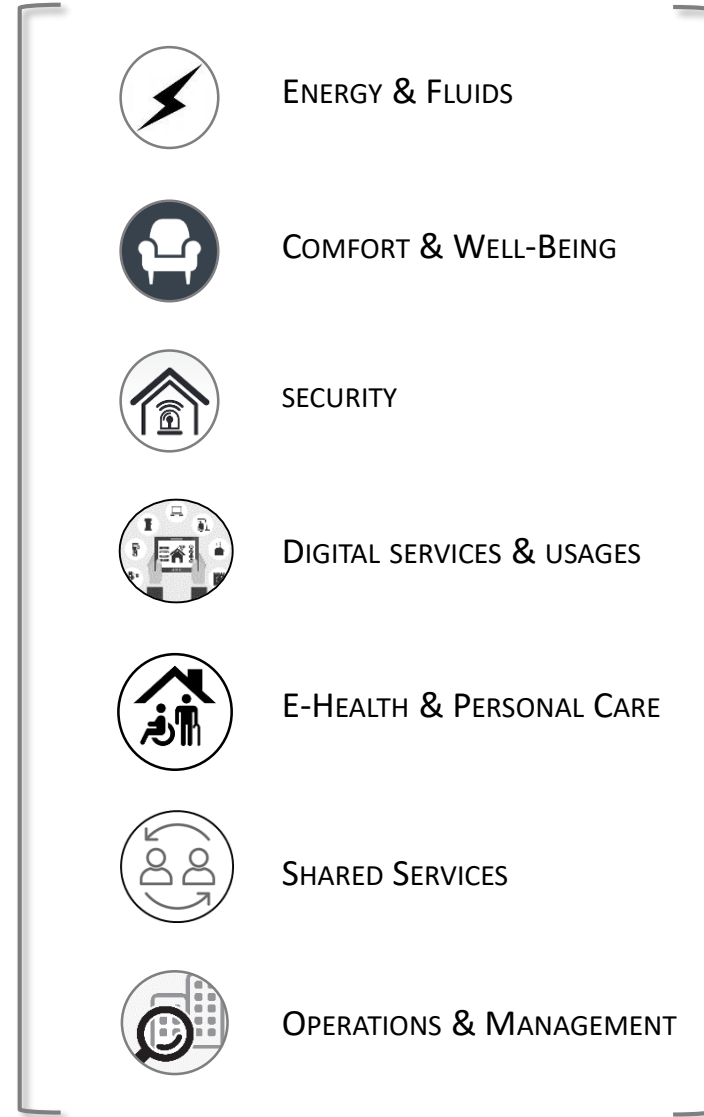
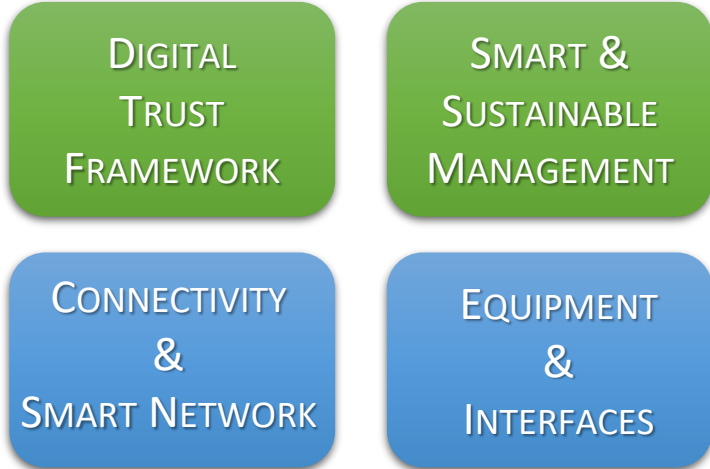
RESIDENTIAL BUILDINGS



R2S FOR RESIDENTIAL BUILDING



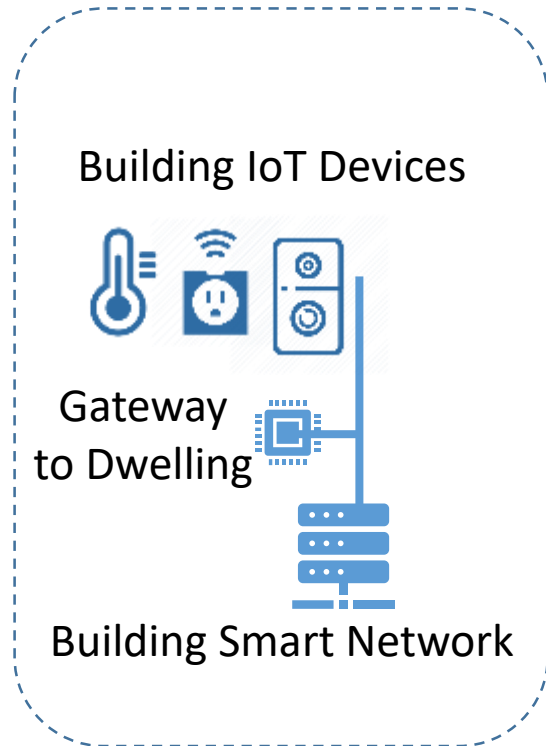
**TECHNICAL &
ORGANIZATIONAL
FOUNDATIONS**



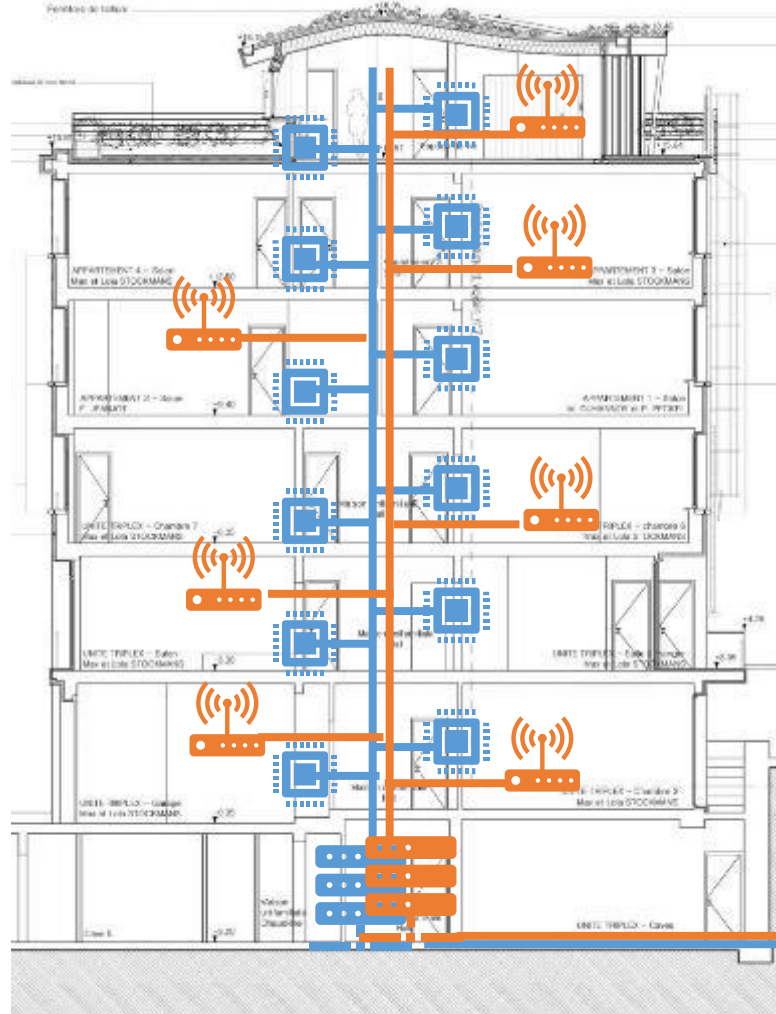
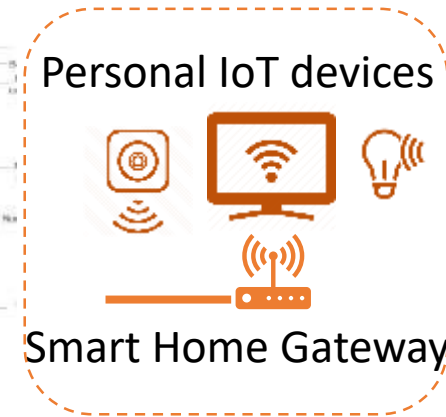
SERVICE DOMAINS

SMART RESIDENTIAL BUILDING VS SMART HOME (OWNED BY OCCUPANT)

Smart Residential Building
« attached to building »



Smart Home
« attached to occupant »



SERVICE FAMILIES FOR R2S RESIDENTIAL

 <p>ENERGIE & FLUIDES</p>	1.1 Mesure et mise à disposition des consommations d'énergie & fluides	1.2 Optimisation des consommations d'énergie & fluides	1.3 Pilotage connecté du chauffage	1.4 Gestion de l'eau	1.5 Transparence dans la communication des consommations énergétiques	1.6 Maitrise des facteurs d'influence des consommations énergétiques	1.7 Flexibilité énergétique ...	1.8 Pilotage de la production d'énergie locale
 <p>CONFORT & BIEN-ÊTRE</p>	2.1 Gestion du confort thermique	2.2 Pilotage des occultants / ouvrants	2.3 Pilotage des éclairages	2.4 Mesure de la qualité de l'air				
 <p>SÉCURITÉ</p>	3.1 Détection d'incendie connectée	3.2 Détection de fuite d'eau connectée	3.3 Détection de fuite de gaz connectée	3.4 Système anti-intrusion connecté	3.5 Vidéo Surveillance des parties communes	3.6 Portier vidéo et accès résidence connectés	3.7 Serrure connectée logements	3.8 Extinction manuelle connectée
 <p>QUALITÉ D'USAGES NUMÉRIQUE</p>	4.1 Carnet numérique du logement et du bâtiment	4.2 Portail de services smart du logement/bâtiment	4.3 Bouquet de services connectés, à la carte	4.4 Réseau Voix-Données-Images garanti et renforcé	4.5 Existence d'un accès public WiFi de la résidence	4.6 Couverture "Indoor" des réseaux Mobiles	4.7 Ecrans interactifs dans la résidence	
 <p>E-SANTÉ & MAINTIEN À DOMICILE</p>	5.1 Système de détection des situations à risques	5.2 Dispositif facilitant la liaison entre les aidants (professionnels et familiaux)	5.3 Dispositif de maintien et développement du lien social	5.4 Systèmes de monitoring des paramètres physiologiques	5.5 Fonctions facilitant le bien vieillir à domicile			
 <p>SERVICES PARTAGÉS</p>	6.1 Bornes de recharge connectées pour VE	6.2 e-Conciergerie	6.3 Boîtes aux lettres / boîtes à colis connectées	6.4 Ressources d'immeuble partagées	6.5 Places de parking partagées	6.6 Ascenseurs connectés		
 <p>SERVICES GÉNÉRAUX</p>	7.1 Supervision des équipements liés aux parties communes	7.2 Maintenance multi technique	7.3 Suivi d'exploitation	7.4 Suivi de gestion de l'immeuble				

to be translated

DISTRICTS

R2S FOR COMMERCIAL BUILDINGS



R2S FOR RESIDENTIAL BUILDINGS



R2S FOR DISTRICT DEVELOPMENT



LABEL
R2S
READY²SERVICES

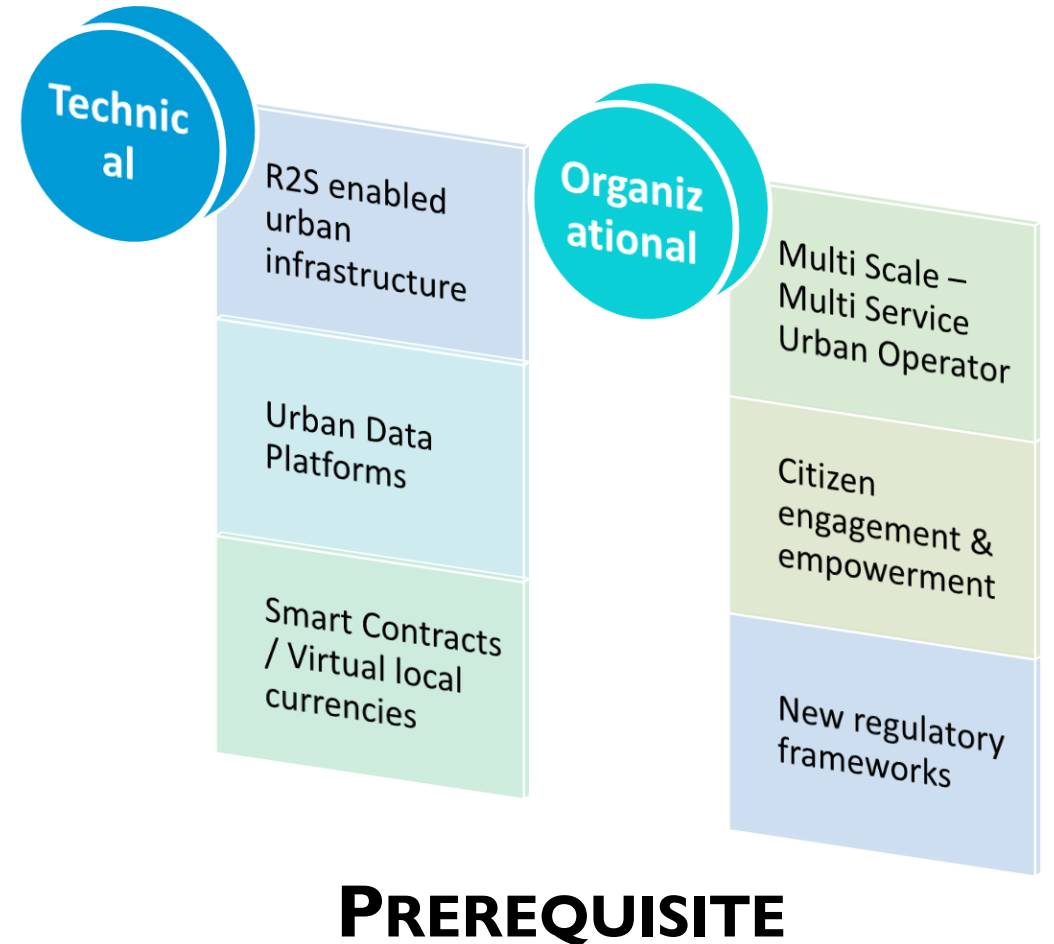
CHALLENGE OF THE SMART CITY

SMART CITIES STRIVE TO CATCH UP WITH DIGITAL TRANSITION, REQUIRING NEW COLLABORATION STRATEGIES

- PROMOTE POSITIVE EXTERNALITIES BY INVOLVING ALL ACTORS OF THE VALUE CHAIN
- DEVELOP A GLOBAL & HOLISTIC VISION VS CURRENT SILO APPROACH
- FOSTER A COLLABORATIVE AND INCLUSIVE ECONOMY
- INVOLVE & EMPOWER THE DIFFERENT STAKEHOLDERS

NEW BUSINESS MODELS BASED ON

- “EVERYTHING” AS A SERVICE
- SHARE ECONOMY
- CROWDFUNDING
- BLOCKCHAIN / VIRTUAL LOCAL CURRENCIES
- ...



EMERGENCE OF NEW PLAYERS & BUSINESS MODELS

SERVICE OPERATORS

- Smart Buildings & Smart City local service aggregation
- New innovative Business Models enabling interaction between heterogeneous players (create value from positive externalities)

TRUSTED THIRD PARTIES FOR URBAN DATA MANAGEMENT

- Provides a consolidated Urban Data Platform
- Warrant for security and confidentiality of Data
- Warrant of the contractual terms of data distribution



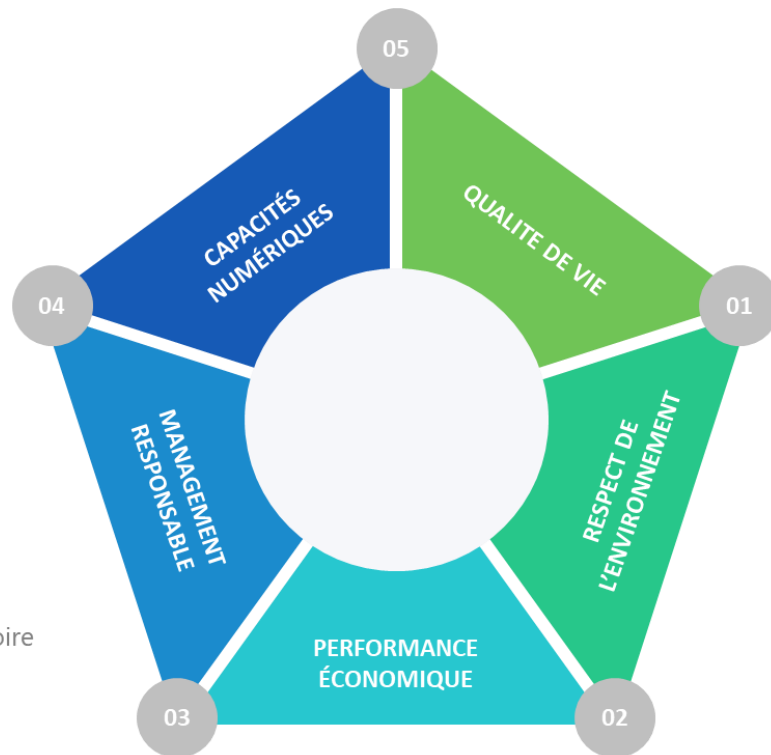
R2S FOR DISTRICT DEVELOPMENT

CAPACITÉS NUMÉRIQUES

- Connectivité & Réseaux
- Interfaces de communication
- Gouvernance numérique
- Cybersécurité
- Sobriété numérique

MANAGEMENT RESPONSABLE

- Conduite de projet
- Gouvernance
- Synergie et cohérence avec le territoire
- Maîtrise foncière



PERFORMANCE ÉCONOMIQUE

- Economie & Coût à long terme
- Dynamisme & Développement du territoire
- Services & Fonctions productives
- Adaptabilité & Évolutivité

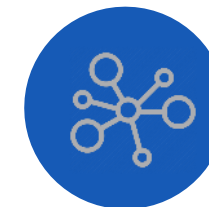
QUALITÉ DE VIE

- Bien vivre ensemble
- Mobilité & Accessibilité
- Santé & Confort
- Paysage, patrimoine & identité
- Résilience, sûreté, sécurité

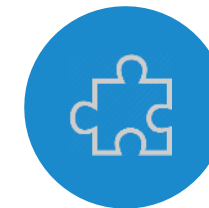
RESPECT DE L'ENVIRONNEMENT

- Energie & Climat
- Nature & Biodiversité
- Eau
- Ressources & Déchets
- Pollutions

to be translated



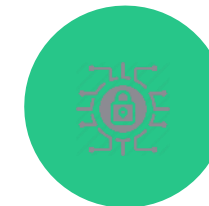
CONNECTIVITÉ & RÉSEAUX



INTERFACES DE COMMUNICATION



GOVERNANCE NUMÉRIQUE



CYBERSÉCURITÉ



SOBRIÉTÉ NUMÉRIQUE

R2S A GLOBAL APPROACH

APPLIED TO MULTIPLE SCALES & MULTIPLE SERVICE DOMAINS

R2S FOR COMMERCIAL BUILDINGS



R2S FOR RESIDENTIAL BUILDINGS



R2S FOR DISTRICT DEVELOPMENT



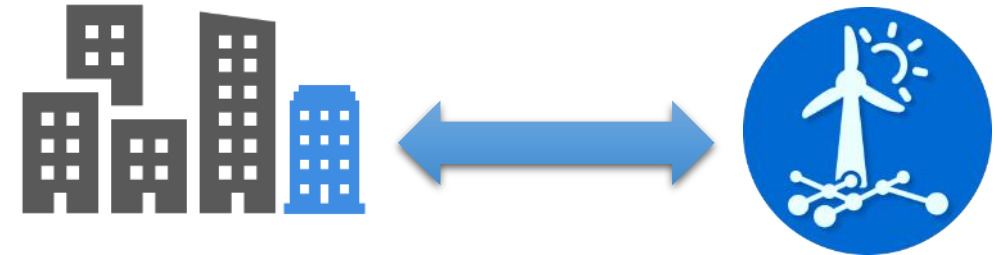
LABEL
R2S
READY²SERVICES

R2S FRAMEWORK EXPANDED TO SERVICE DOMAINS



R2S-4GRIDS - REFERENCE FRAMEWORK

- R2S-4Grids is the energy extension of R2S reference framework shared by the ecosystem of building developers and energy stakeholders
- A framework that applies to commercial buildings as well as collective housing, new construction or renovation.
- A framework dedicated to building owners and developers
- A framework allowing buildings to host a set of innovative energy services and become players in the energy transition.



FUNCTIONAL PROPERTIES OF AN R2S-4GRIDS BUILDING

■ LEVEL 1 – CONNECTED BUILDING

→ share data and receive consumption information

ENERGY DASHBOARD



■ LEVEL 2 – RELIABLE BUILDING

→ Know energy production, consumption and stick to objectives

CONTROL OF THE ENERGY BILL AND TARIFF OPTIMIZATION

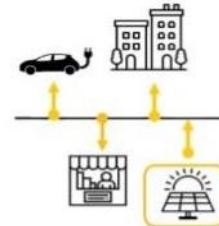


■ LEVEL 3 – ACTIVE BUILDING

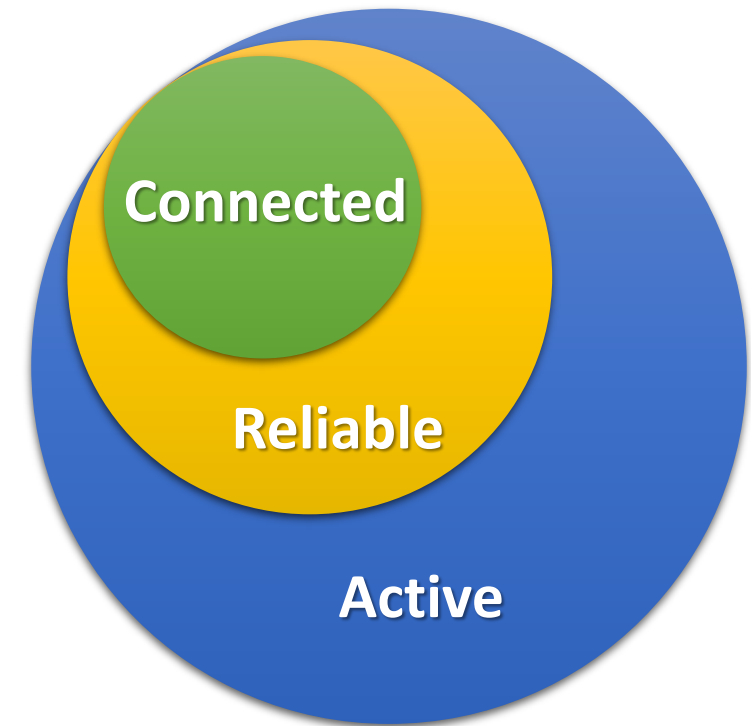
→ Modulate production, consumption and storage according to requests, forecasts

...

MAXIMIZING COLLECTIVE SELF-CONSUMPTION



3 LEVELS OF FUNCTIONALITIES FOR THE R2S-4GRIDS BUILDING

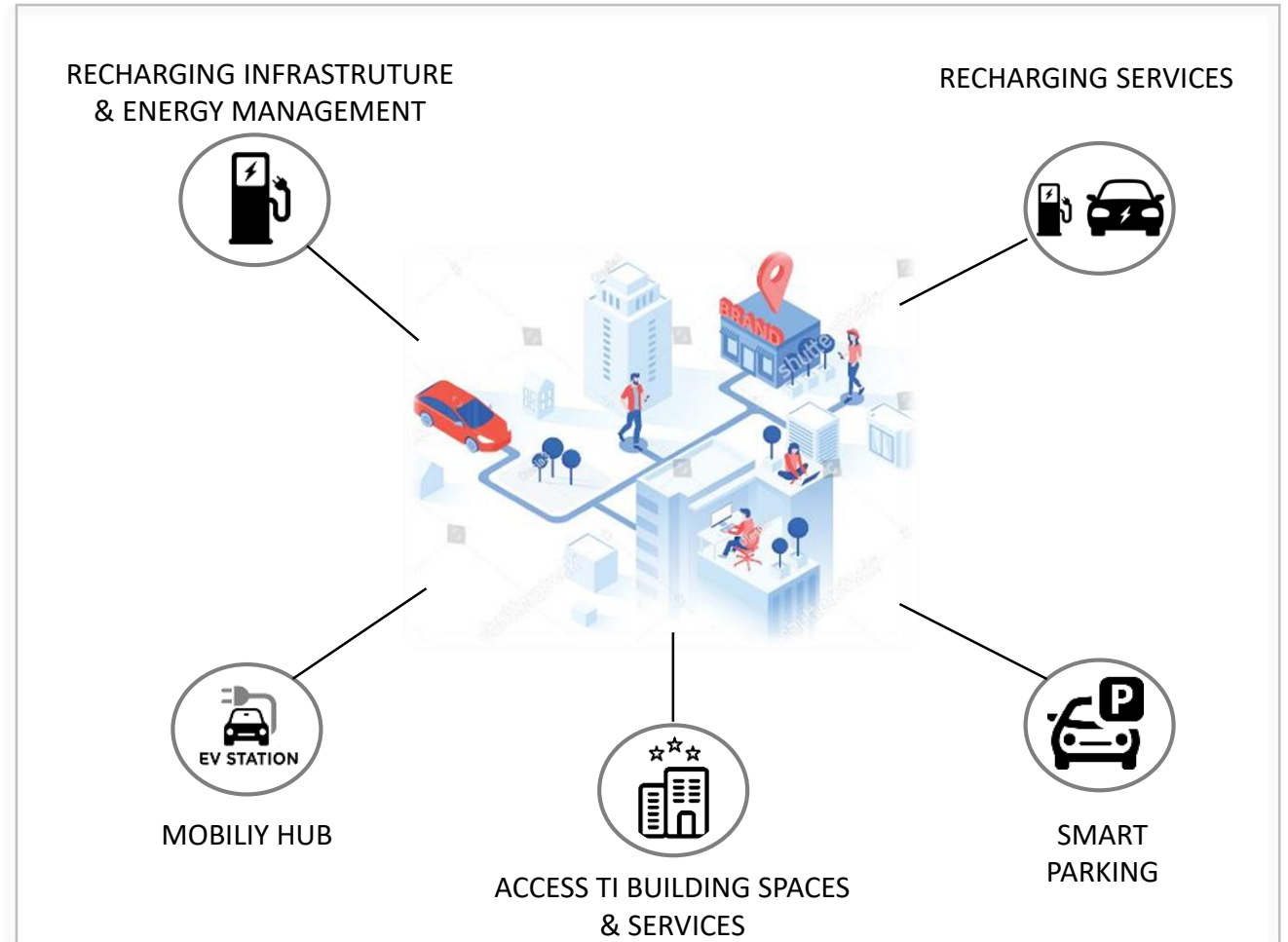


R2S 4 MOBILITY

Technical & Organizational

Mobility Services

-  **BUILDING INFRASTRUCTURE**
-  **EQUIPMENT & INTERFACES**
-  **DATA MANAGEMENT**
-  **CYBERSECURITY**
-  **QUALITY MANAGEMENT SYSTEM**

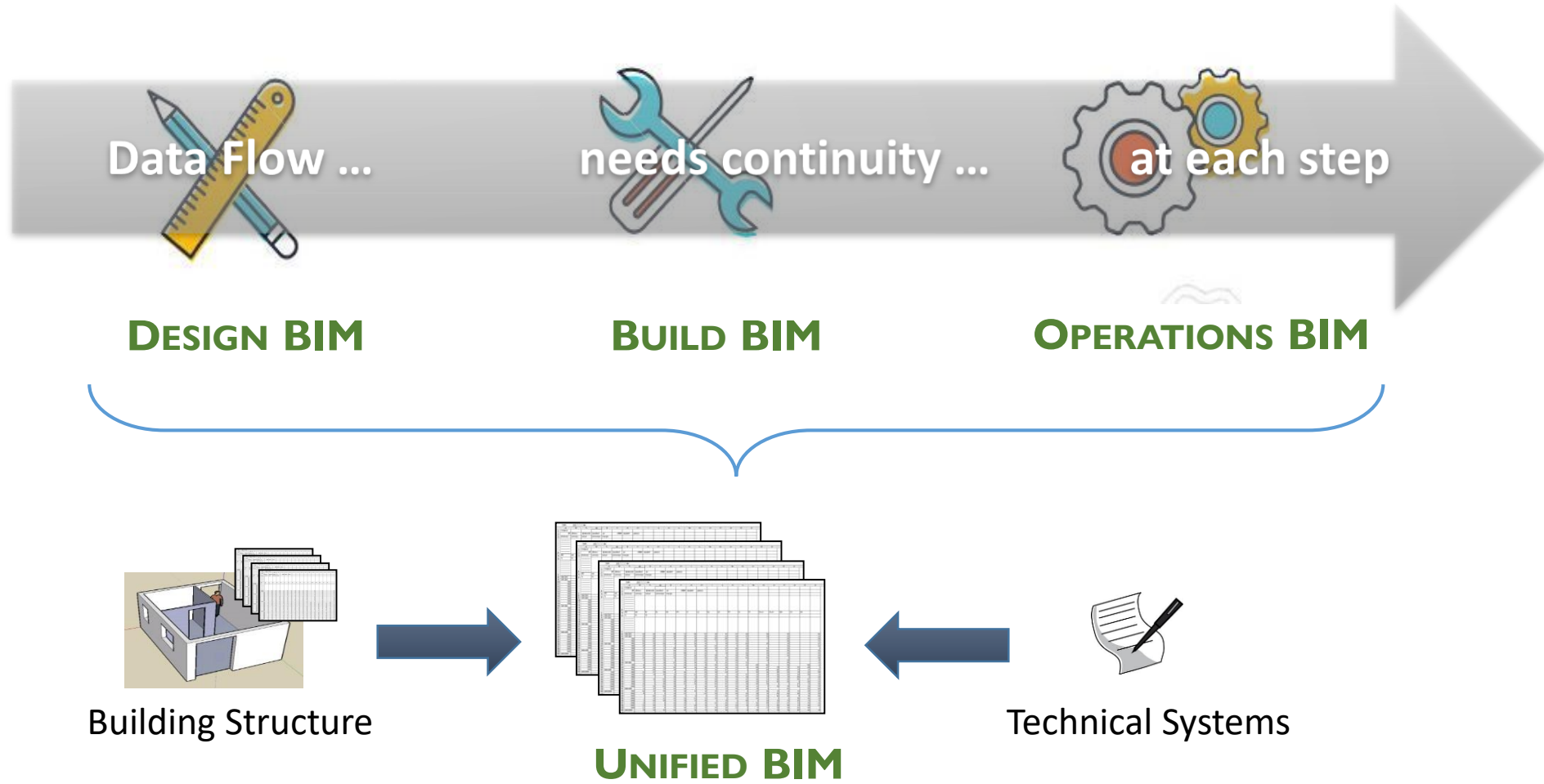


BEYOND R2S THE NEED TO FOSTER A DATA MANAGEMENT CULTURE



**DATA
MANAGEMENT**





Setting expectations from Building Developers/Owners



Selecting BIM usages to be implemented

Controlling through auto evaluation and improvement process

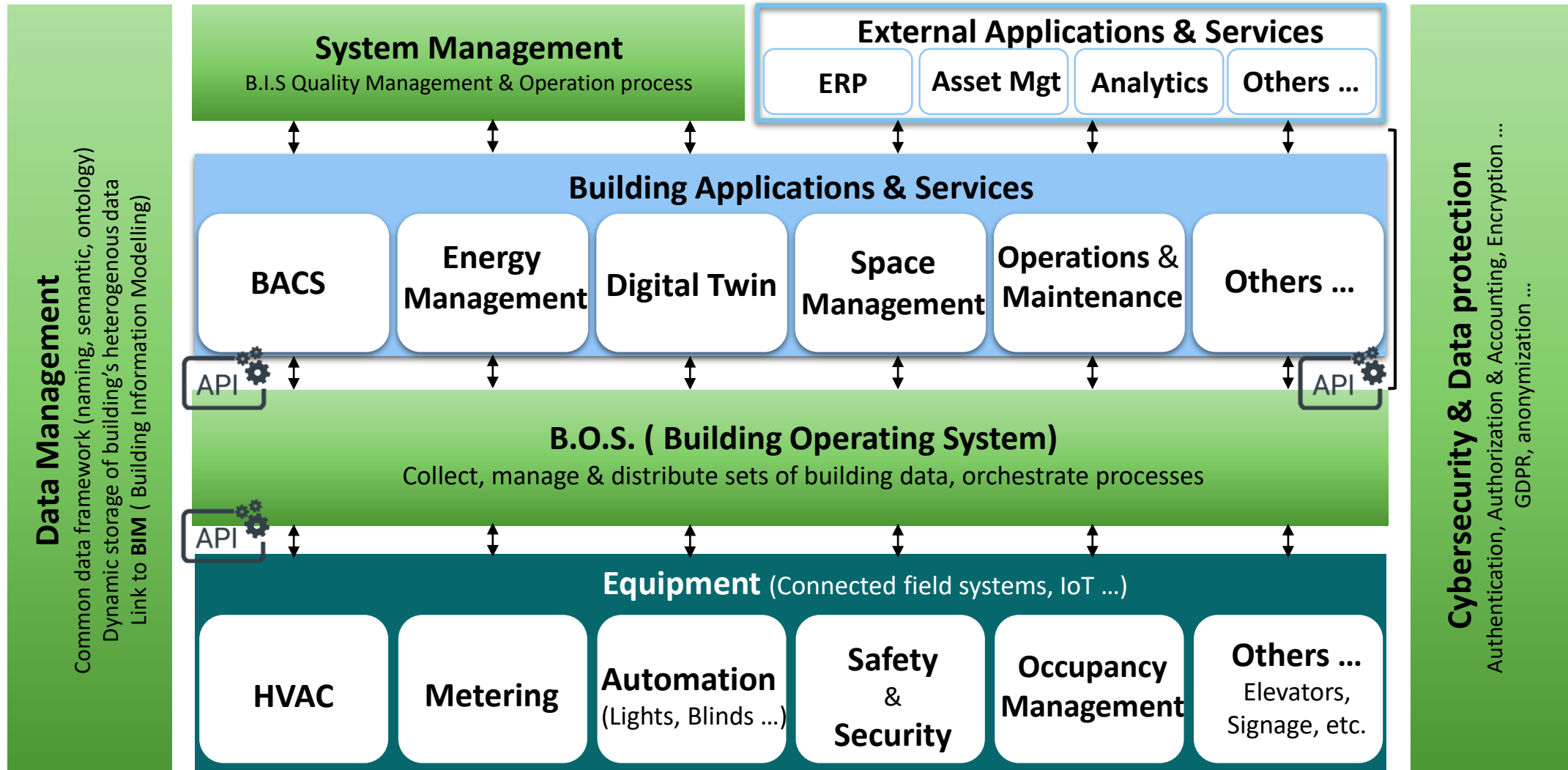
Integrating Project stakeholders' operational requirements

METHODOLOGY



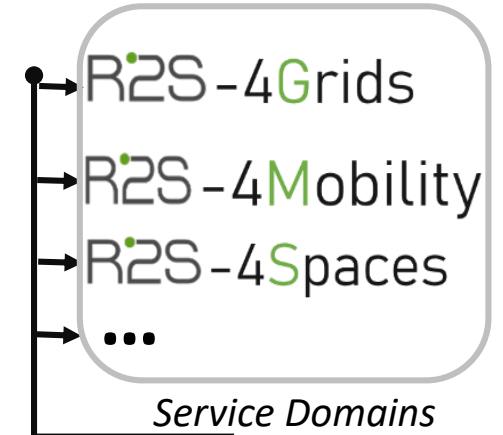
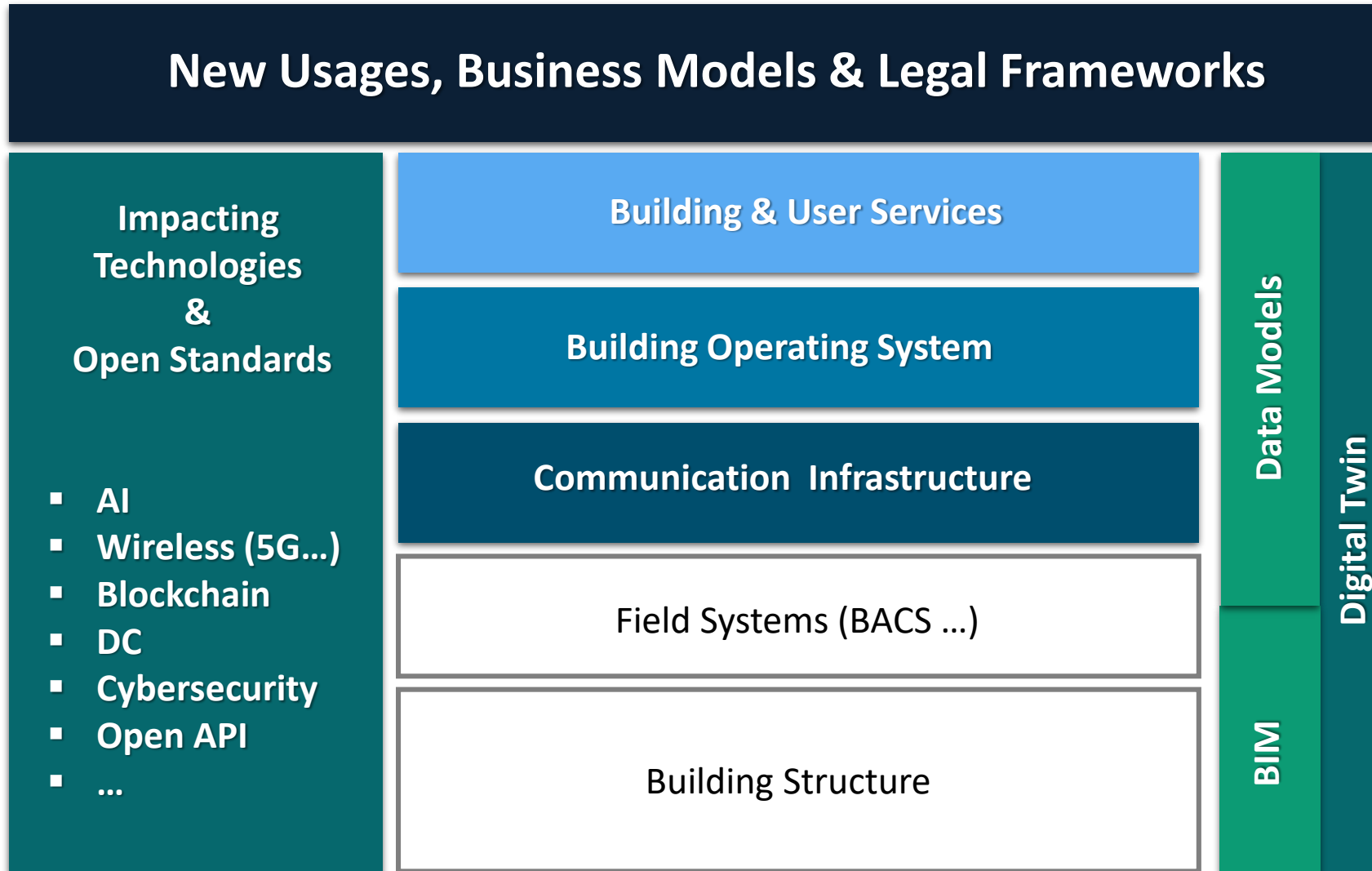
BENEFITS

BUILDING INFORMATION SYSTEM (B.I.S.)



IN SUMMARY : SBA IS PIONEERING THE WAY FORWARD

FOR FRAMING THE SMART BUILDING BLOCKS



R2S
READY2SERVICES
*Digital Infrastructure
Framework for Buildings*

B4U
BIM FOR VALUE
End to End BIM Methodology

THANK YOU FOR
YOUR ATTENTION

