

1st ITU Workshop on Data Processing and Management
for IoT and Smart Cities & Communities
(Brussels, Belgium, 19 February 2018)

ITU-T FG-DPM: Key Activities and Future Plans

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Internet of Things and Data

- From connecting devices to **creating value**



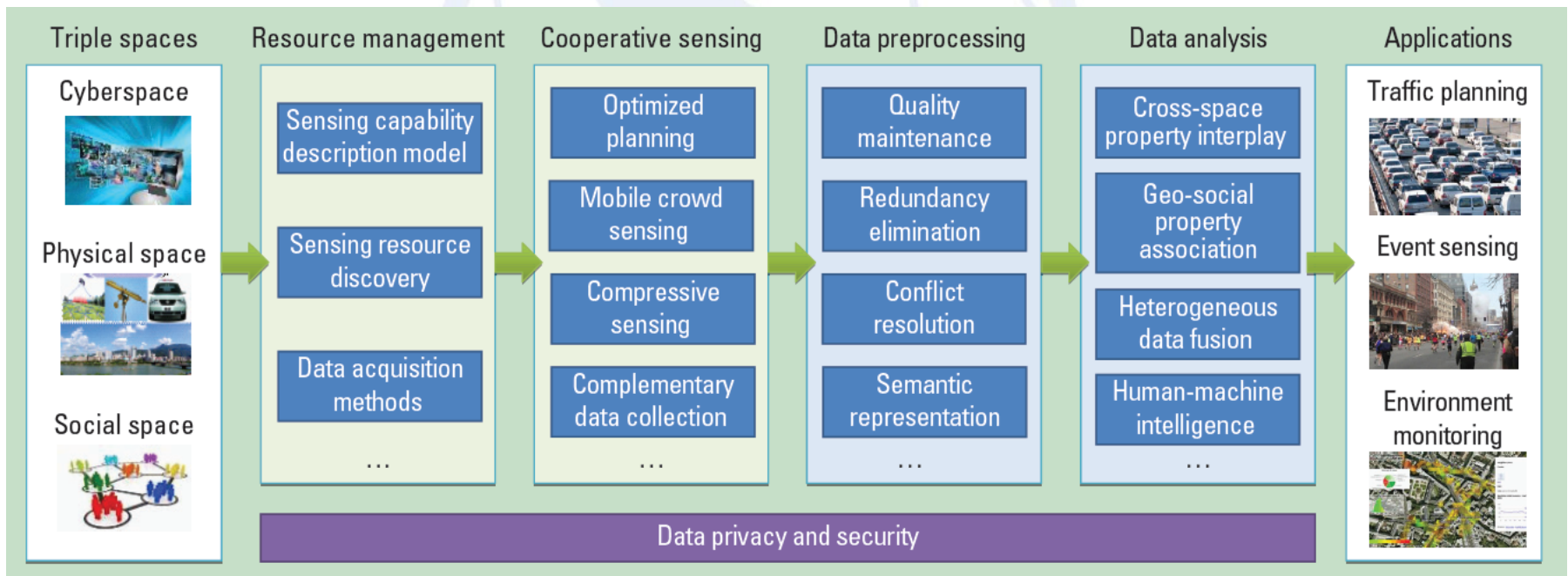
https://www.itu.int/osg/spu/publications/internetofthings/InternetofThings_summary.pdf

<http://www.smartinsights.com/internet-marketing-statistics/happens-online-60-seconds/attachment/what-happens-online-in-60-seconds/>

Data-driven

IoT and Smart Cities & Communities

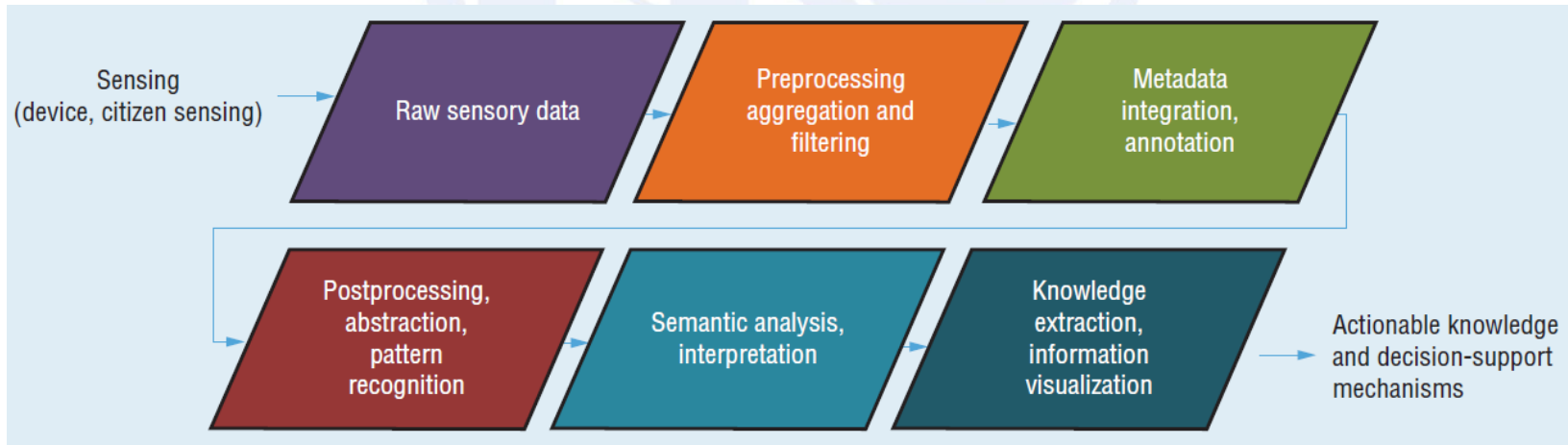
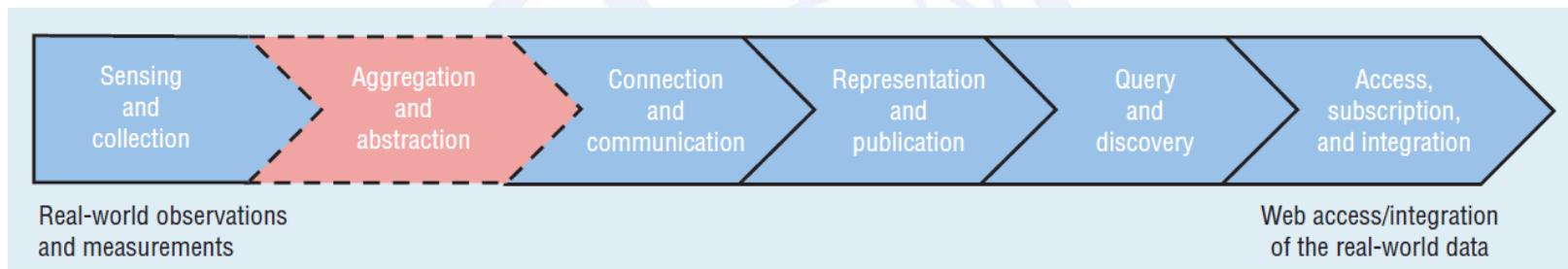
- Support higher volume and velocity of data



“A Data-Centric Framework for Cyber-Physical-Social Systems”, IEEE IT Professional, Nov.-Dec. 2015.

From Data to **Actionable Knowledge**

- The data production and access chain



FG-DPM: Background

- **Parent study group:** ITU-T SG20 (IoT and SC&C)
- **Established:** ITU-T SG20 meeting (Dubai, 22 March 2017)
- **Open to all stakeholders** (ITU members & non-members)
- **Overall objectives:**
 - promote the establishment of trust-based data management frameworks for IoT and SC&C
 - investigate existing and emerging technologies
 - Identify and address standardization gaps and challenges
- **First meeting:** Geneva, 17-19 July 2017
(collocated with SG20 Rapporteur group meetings)
- **Second meeting:** Geneva, 20-25 October 2017

FG-DPM: ToR

- To study, review and survey existing technologies, platforms, guidelines and standards for **data processing and management** including data format in support of the mandate of SG20;
- To recognize and highlight the various perspectives for the future of **data driven eco-environments**;
- To promote **security and trust** within data management frameworks;
- To identify and study **data protection** techniques;
- To facilitate cross-cutting **data interoperability** issues and point the way to the development of efficient and scalable approaches to managing systems data;
- To study **meta-data**;
- To study **trust in data management** frameworks including digital identification and certification;
- To investigate **the role of emerging technologies** to support data management and emerging trends including **blockchain**;
- To identify challenges in the standardization activities for data processing and management.
- To establish liaisons and relationships with other organizations which could contribute to the standardization activities for data processing and management.

FG-DPM: Focus group structure

WG	Title	Chair
WG1	Use Cases, Requirements and Applications/Services	Mr Martin Brynskov (Open and Agile Smart Cities Initiative)
WG2	DPM Framework, Architectures and Core Components	Mr Steve Liang (OGC), Mrs Hakima Chaouchi (Telecom SudParis)
WG3	Data sharing, Interoperability and Blockchain	Mrs Liangliang Zhang (Huawei)
WG4	Security, Privacy and Trust including Governance	Mr Robert Lewis-Lettington (UN-HABITAT)
WG5	Data Economy, commercialization, and monetization	Mr Okan Geray (Smart Dubai), Mr Abdulhadi AbouAlmal (Etisalat)

FG-DPM: Expected Deliverables – 1

WG	Deliverables
All	<ul style="list-style-type: none">• D0.1 - DPM Terms and Definitions, Taxonomies
WG1	<ul style="list-style-type: none">• D1.1 - Use Cases Analysis and General Requirements for DPM• D1.2 - IoT and SC&C Applications and Services using DPM
WG2	<ul style="list-style-type: none">• D2.1 - DPM Framework for Data-driven IoT and SC&C• D2.2 - DPM Functional Architectures• D2.3 - Data Modeling and Formats Specification for DPM<ul style="list-style-type: none">✓ D2.3.1 Technical report on data format for IoT and smart city✓ D2.3.2 Technical report on web based microdata format for IoT and smart city✓ D2.3.3 Technical report on metadata format for IoT and smart city• D2.4 - Technical Report on Data Analytics• D2.5 - Technical Report on Data Visualization• D2.6 - Framework of Meta Data Management• D2.7 - Framework of Data Life Cycle Management



FG-DPM: Expected Deliverables – 2

WG	Deliverables
WG3	<ul style="list-style-type: none">• D3.1- Framework of Open/Private Data• D3.2 - Technical Enablers for Open Data Platform• D3.3 - Technical Report on Data Interoperability• D3.4 - Technical Report on Data sets Interoperability• D3.5 - Overview of IoT and Blockchain• D3.6 - Blockchain-based Data Exchange and Sharing Technology• D3.7- Using blockchain to improve data management
WG4	<ul style="list-style-type: none">• D4.1 - Framework of Security and Privacy in DPM• D4.2 - Privacy Management in Smart Cities• D4.3 - Technical Enablers for Trusted Data• D4.4 - Data Quality Management for Trusted Data• D4.5 - Data Governance Framework for IoT and SC&C• D4.6 - Risk Assessment Framework for DPM in IoT and SC&C

FG-DPM: Expected Deliverables – 3

WG	Deliverables
WG5	<ul style="list-style-type: none">• D5.1 - Modeling of Data Economy for value creation and Stakeholders identification• D5.2 - Business models, commercialization and monetization to support data economy• D5.3 - Data economy impact assessment, policy and sustainability implications• D5.4 - Data economy regulatory framework
All	<ul style="list-style-type: none">• D0.2 - DPM Standards Roadmap

Key Activities

- Identified existing activities on DPM
 - Invited experts from various groups (ITU, other SDOs, R&D projects, universities, etc.)
- Progressed several deliverables
 - Created initial documents based on inputs from editors/contributors
- Finalized **the template of DPM use cases** in WG1
 - Call for contributions

Future Plans

- **Report 1st year activities** to the SG20 May meeting
 - Request the extension of FG-DPM lifetime
- **Finalize Phase 1 deliverables**
 - Candidate deliverables (D1.1, D2.1 and other ones)
- **Make progress for other deliverables**
 - Prioritize deliverables and concentrate them
 - If necessary, merge multiple deliverables
- **Promote related activities**
 - Workshops, liaisons

Future Meetings

- Upcoming FG-DPM meetings – Tentative schedules
 - **4th meeting, May 2018** (before the SG20 meeting)
 - **5th meeting, September 2018** (in conjunction with ITU Telecom World 2018)
 - **6th meeting, December 2018** (in conjunction with the SG20 meeting)
- Each WG – Interim activities

Concluding Remarks

- **Data is the new Oil**
 - The world's most valuable resources (The Economist)
 - Essential element in Emerging Converged Technologies (**IoT, Big Data, Analytics**)
- **ITU-T FG-DPM**
 - Pave the way for standardization on data ecosystem and services
 - Accelerate ITU-T SG20 activities
 - Closely collaborate with other groups in ITU and related SDOs

