

# Dr. Lindsay Frost

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Previously: research manager in physics facilities in Germany, Italy and Australia; manager NEC R&D teams for 3GPP, WiMAX, fixed-mobile convergence, WLAN; group chairman in Wi-Fi Alliance; Board Member of Home Gateway Initiative; co-chair of the HGI Smart Home group

# Welcome to the World of Standards



## SMART CITIES, STANDARDS, CONTEXT: WHERE IS THE INTEROP?

Lindsay Frost (ETSI Board Member, SF-SSCC Delegate, ISG CIM Chairman, NEC Labs Europe)  
("SMART CITY IOT PLATFORM & SOLUTIONS CONVERGENCE & INTEROPERABILITY" , 06/06/2018)

# IMAGINE YOU ARE A SMART CITY MAYOR ... & YOU WANT INTEROPERABLE SMART-ENERGY

... or Smart Traffic with Smart Parking

... or Air-Quality Monitoring with Emergency Service Planning



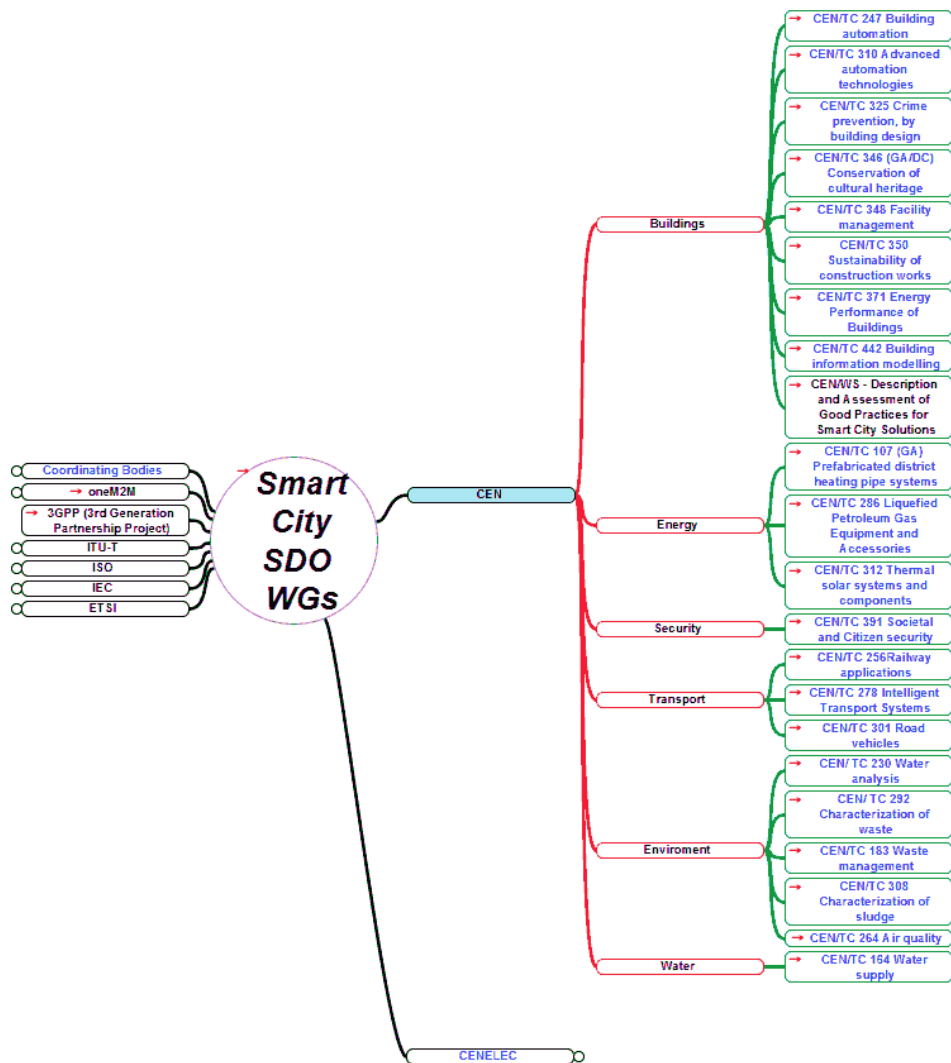
Who do  
you talk  
to ?

... or Public Event Scheduling with Multi-modal Transport

... or Citizen Reporting of Problems plus „Heat Maps“ of KPIs

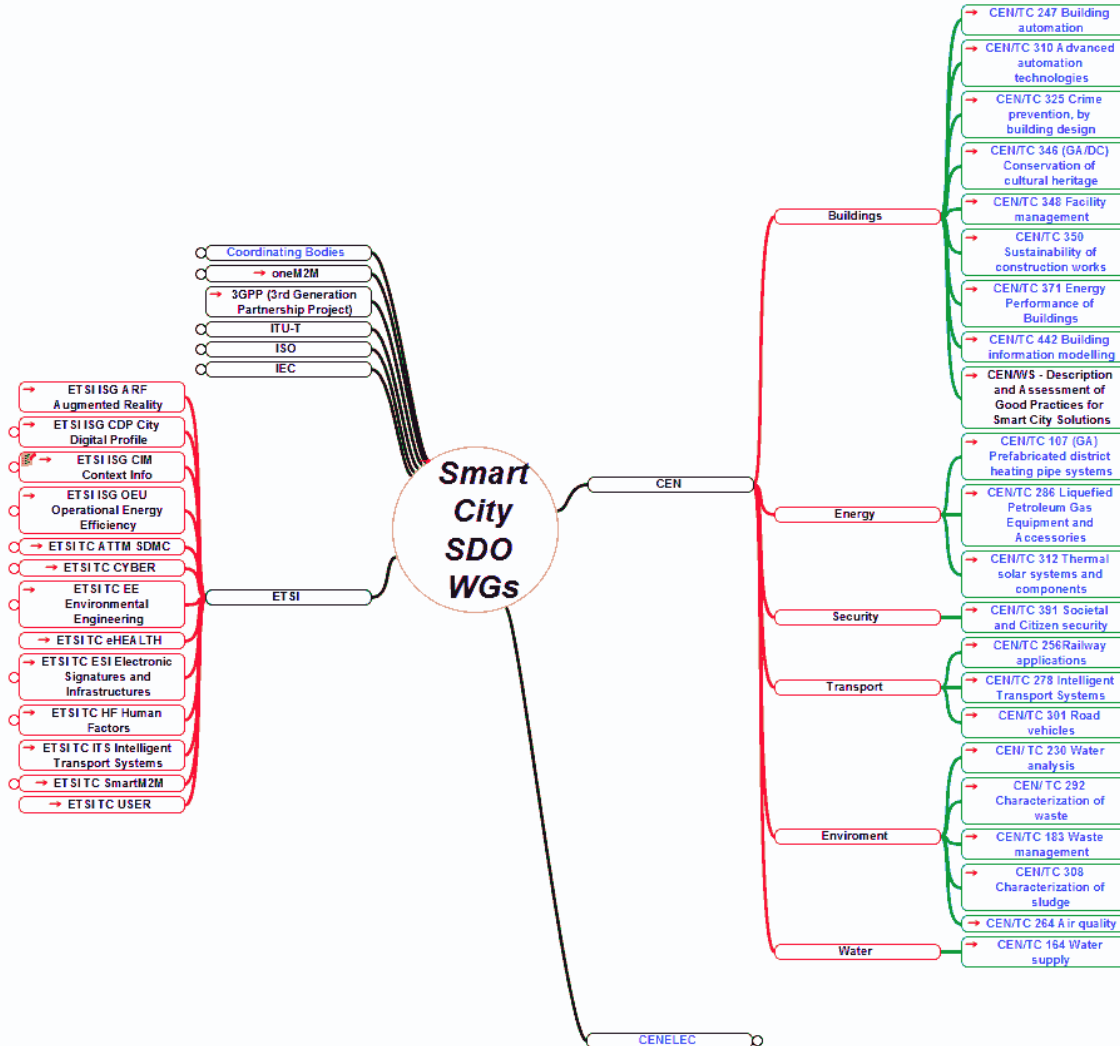
... I WANT IN

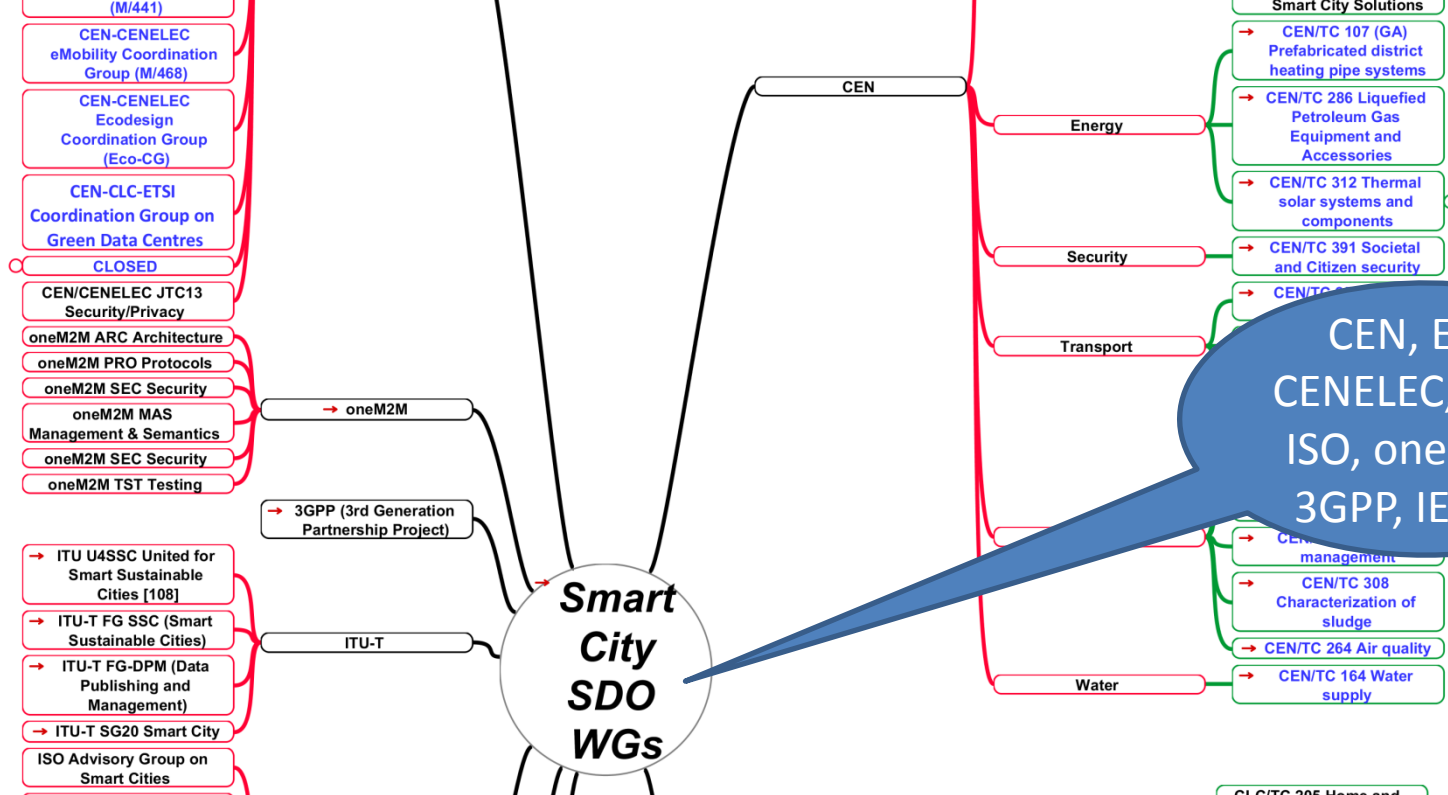
CEN?



... I WA

ETSI?



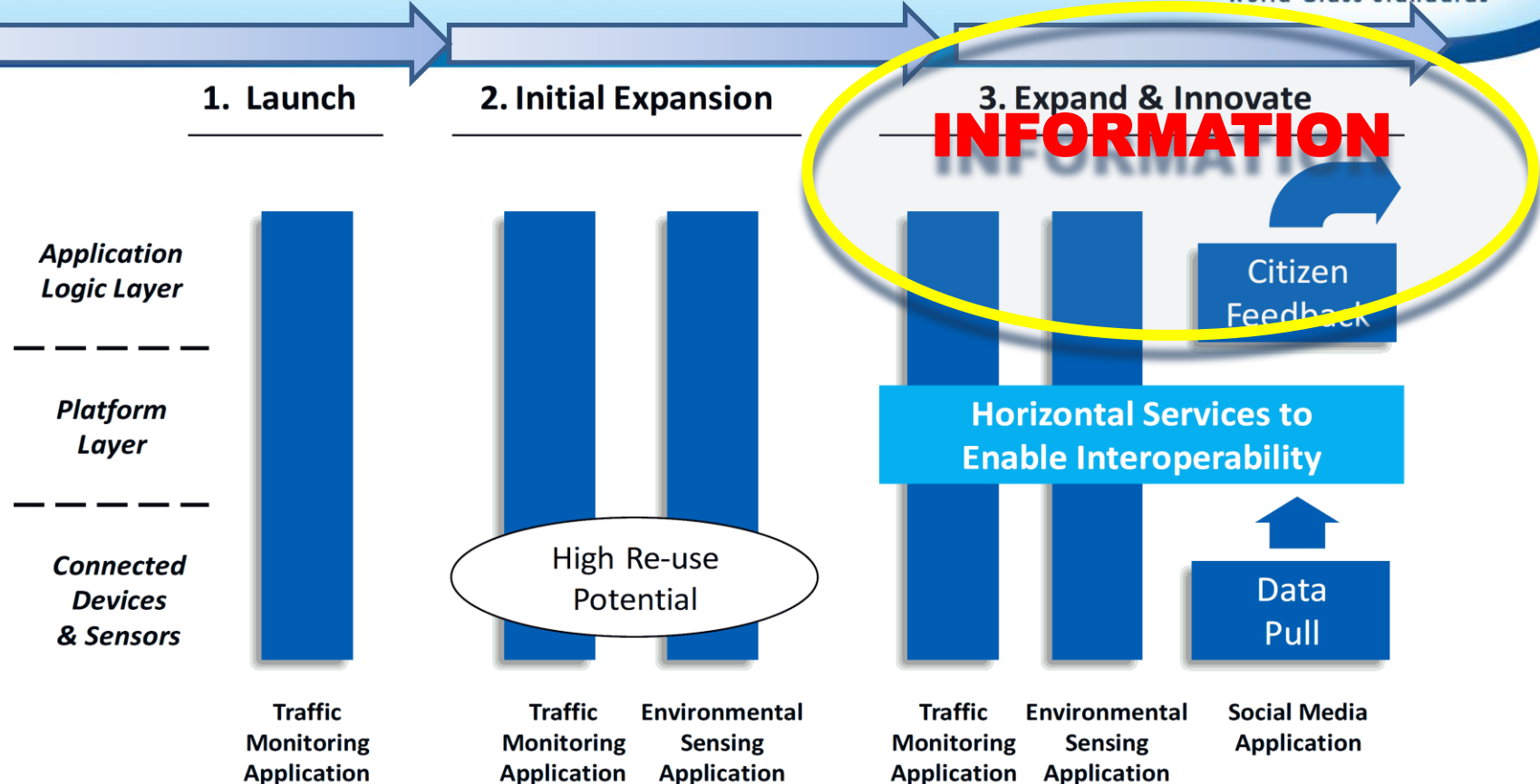


CEN/CENELEC/ETSI [Sector Forum on Smart and Sustainable Cities](#) is trying to create a „library“

But a library, or even a cross-referenced bibliography, does NOT evaluate and prioritize Specs.

We need open trials and a „layered“ approach for top-down selection of platforms.

# ETSI ISG CDP IS STARTING A TOP-DOWN VIEW



**... to make it easier  
for END-USERS  
and CITY DATABASES  
and IoT internet-of-things  
and 3rd-party APPS  
to exchange INFO**

User  
Apps

Open  
Data

IoT

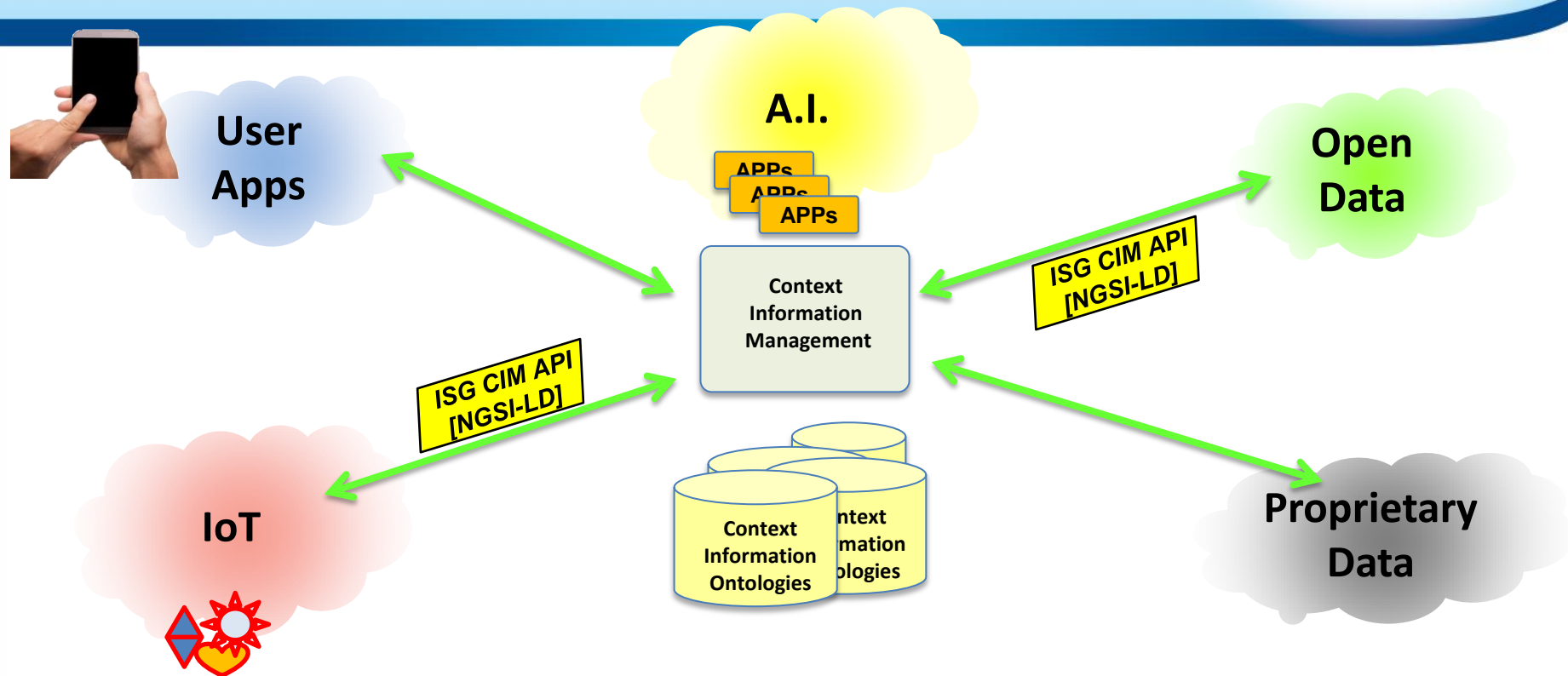
Applications

A.I.

ISG CIM API  
[NGSI-LD]



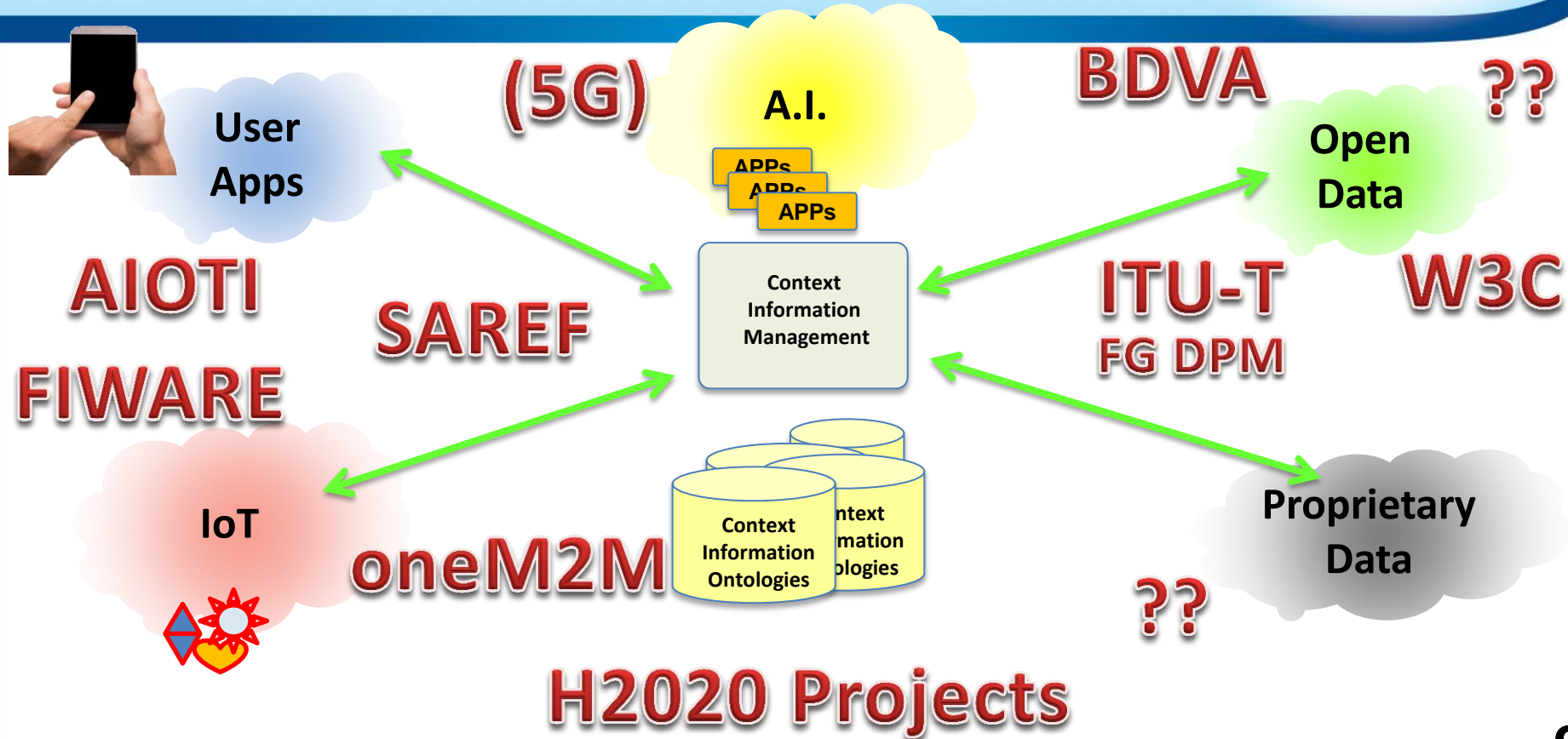
# CONTEXT INFORMATION MANAGEMENT: EXCHANGE DATA AND DEFINITIONS (ONTOLOGY)



*Exchanging data and ontology allows Users and A.I. to see **MEANING***



# CONTEXT INFORMATION MANAGEMENT: NEEDS COLLABORATIONS FROM ALL SIDES



# INTEROPERABILITY IS NOT FREE ... IT IS PAID BY WORKING TOGETHER

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