



EPBD 2nd recast: OPPORTUNITIES & CRITICAL ASPECTS

A JOINT SEMINAR with



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Cultura e Tecnica per Energia Uomo e Ambiente

13 March 2018, Libra Room

mce



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expocomfort

13-16 Marzo / March 2018 | Fiera Milano



Stefano P. Corgnati

Rehva President

EPBD 2ND RECAST AND BUILDING DIGITALISATION

Driving Energy Transition in EU → to a post-carbon society

Decreasing the EU's energy dependency

*Decreasing the EU's energy demand
(focusing on building sector as a main priority,
and on mobility too)*

Increasing energy demand covered by RES

*The "EU society" (people) must use less energy
(users' awareness, behavioral changes,...)*

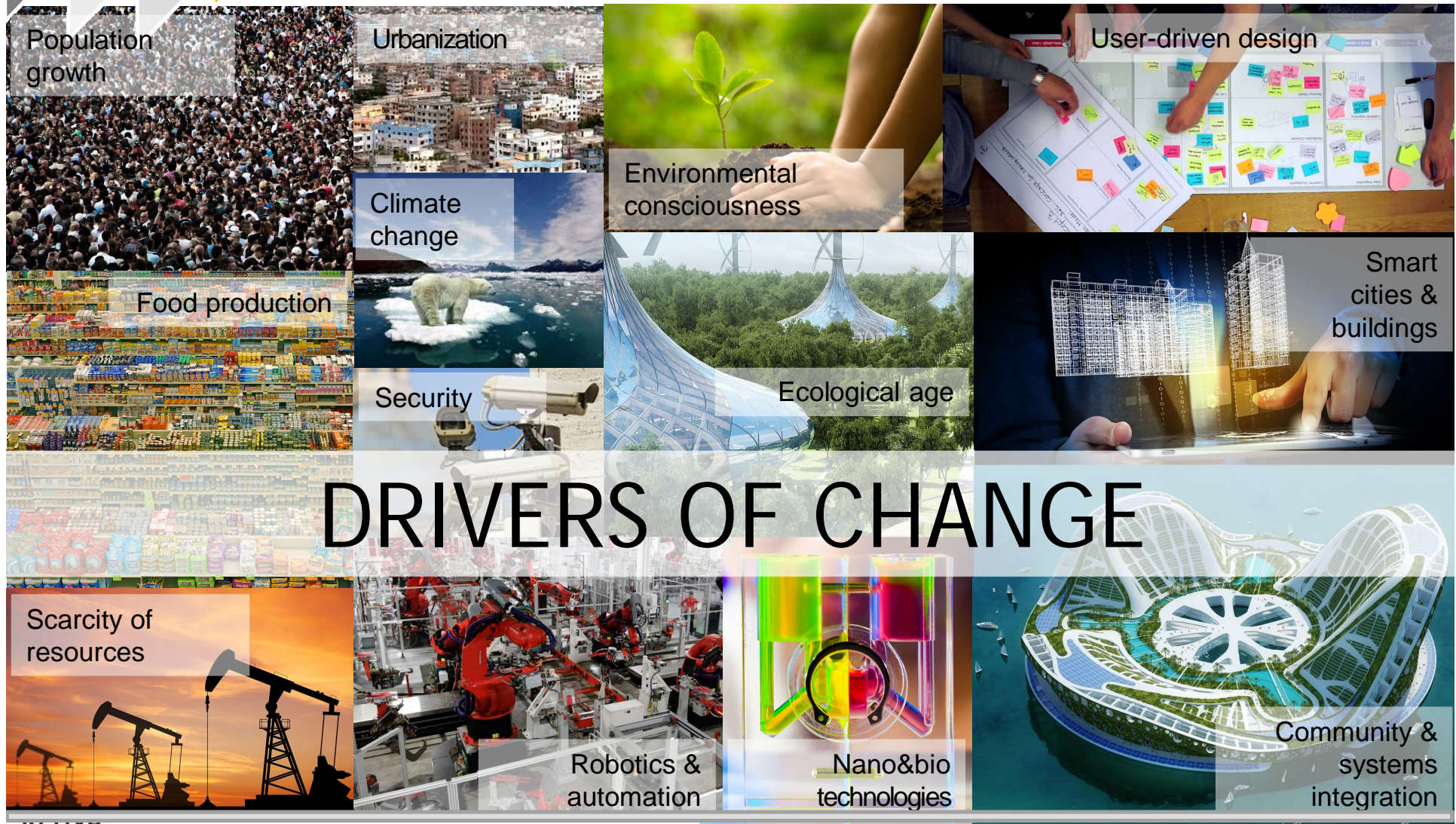
Less
imported
energy

↓ Demand

↑ RES

● Human in
the center

Driving Energy Transition in EU → to a post-carbon society



Energy Transition in EU in MOBILITY SECTOR

Transition to Electrical Vehicles

Autonomous driving & Smart Drivers



Energy Transition in EU in BUILDING SECTOR

Transition to ALL-ELECTRIC BUILDINGS

Building Automation & Smart Occupants



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EPBD to drive the transition ?

1997: Kyoto
Protocol

2008: EU Climate and
Energy Package

Target
20-20-20

Energy
Roadmap 2050

in Europe

2002

Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings - **EPBD**

BUILDING ENERGY CERTIFICATE (! Calculated vs Real !)

2010

Directive 2010/31/EU of the European Parliament and the Council of 19 May 2010 on the energy performance of buildings (recast) - **EPBD recast**

Nearly Zero Energy Building Principle

2018

Cost Optimal Approach (! Economy !)

Directive → EPBD 2nd recast

Smart Building -> Sensoring, Monitoring & Interacting (! Data !)

Building 4.0 <-> Factory 4.0 (! Digitalisation !)

HVAC/ENERGY Systems MONITORING FOR A “CONNECTED” BUILDING



DIFFERENT NEEDS



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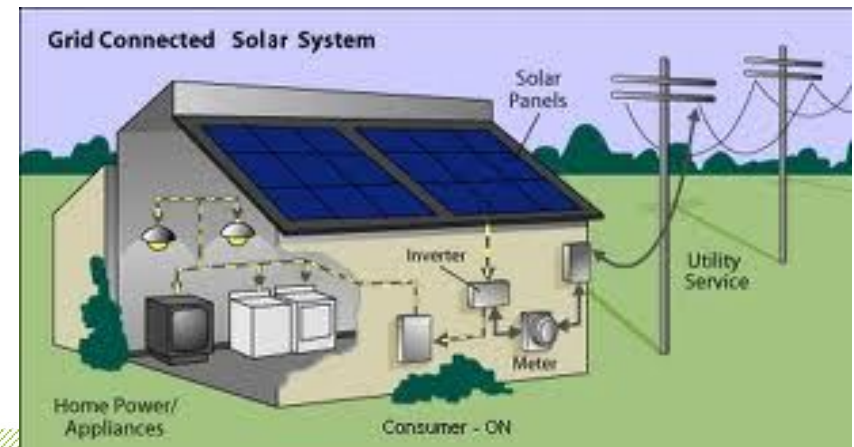


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**DIFFERENT
SUPPLIERS**

**HVAC/ENERGY SYSTEMS
INTEGRATION**



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ICT & IOT entering the HVAC sector



Measure / Monitor



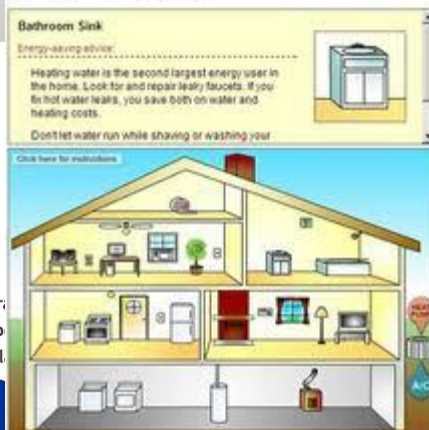
Control / Act



Info / Advices



Integration / Selection

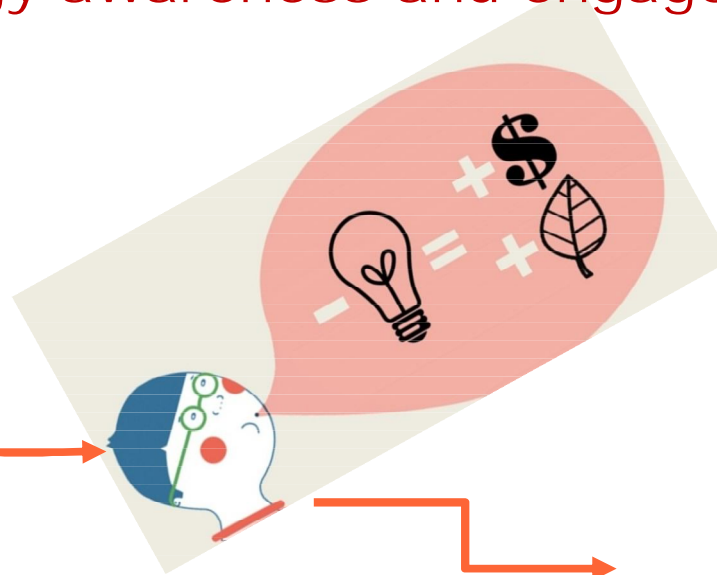


HVAC data for user energy awareness and engagement

1. real-time energy monitoring



2. real-time
visualisation of the
energy profile
(hour/day/week)



KPI

3. Data analysis and calculation
of KEY PERFORMANCE
INDICATORS

4. Customized feedbacks to drive
conscious behaviors and actions



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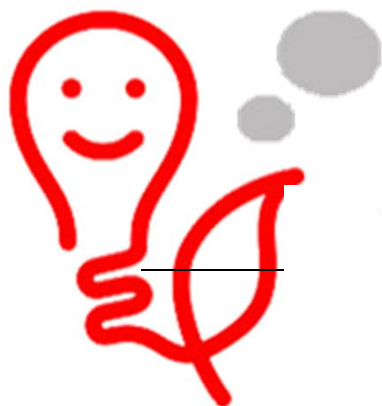


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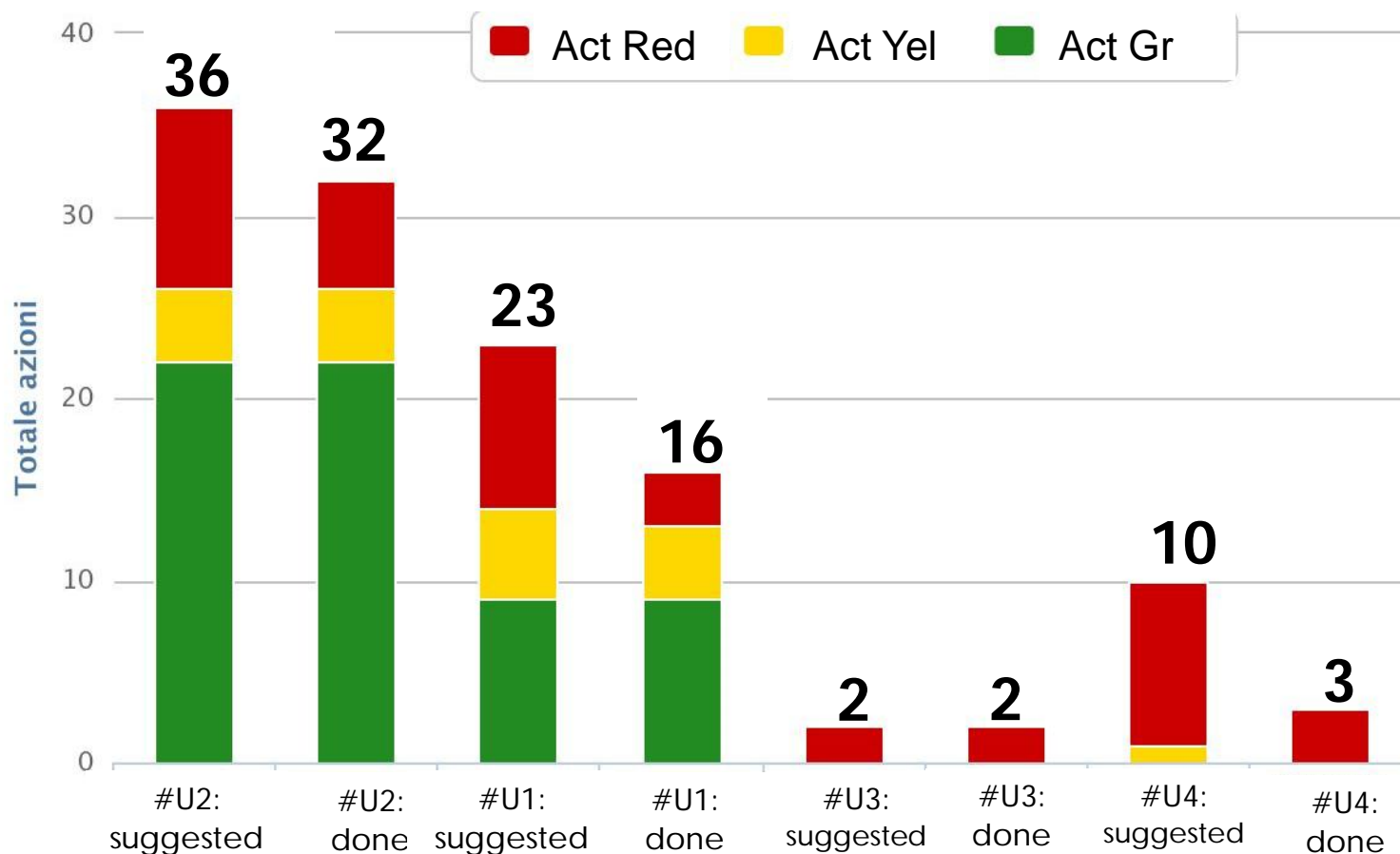
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2 User energy awareness and engagement

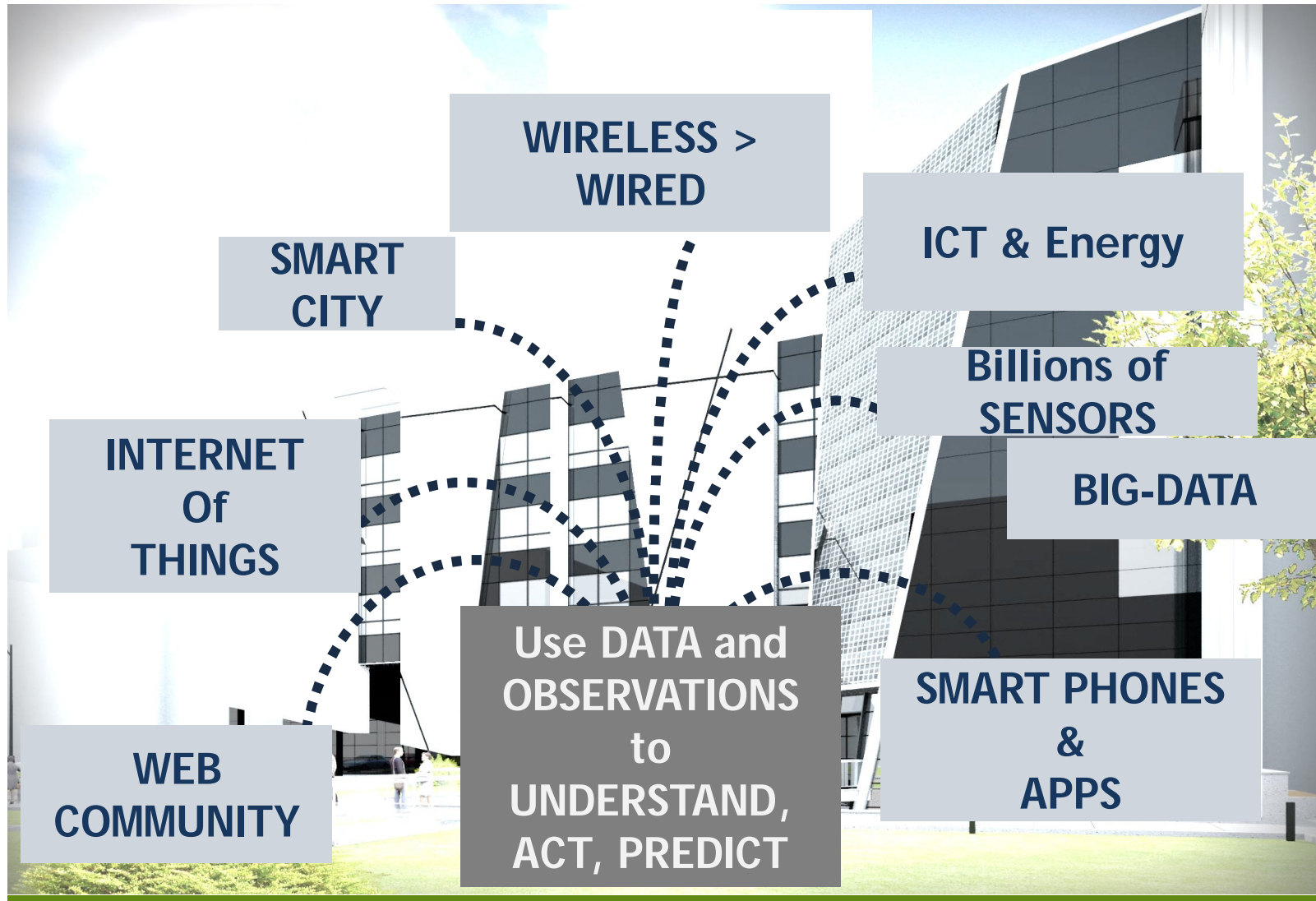
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The energy coach: Mr. Watt
Feedbacks & actions



CONNECTED BUILDINGS in a CONNECTED WORLD



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ENERGY run by information



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**In the very next future,
the economical VALUE
created by DATA
will OVERCOME
the economical value of
ENERGY.**

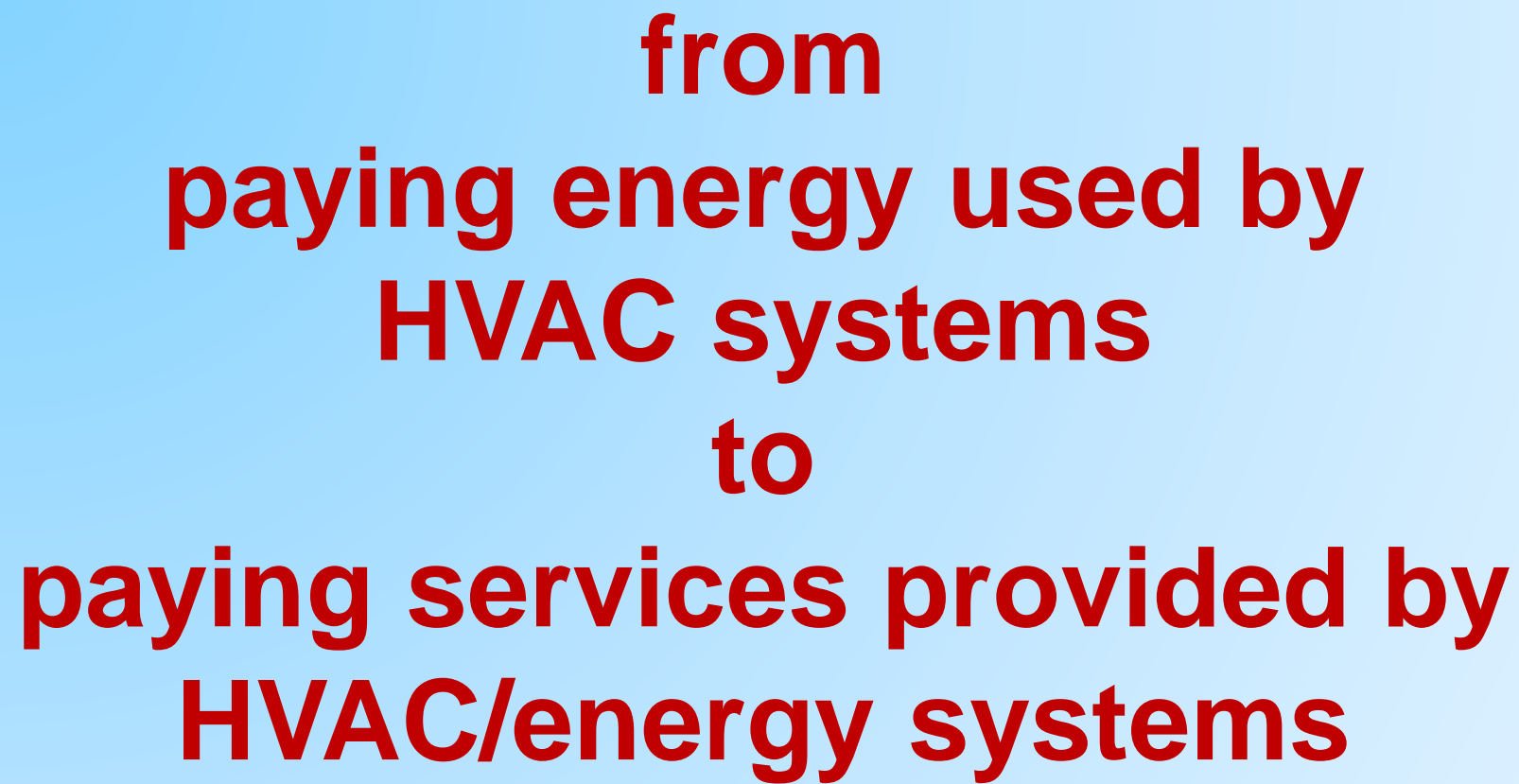
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**from
paying energy used by
HVAC systems
to
paying services provided by
HVAC/energy systems**

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THANK YOU !

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