DRONE ENABLE/2

ATM/UTM

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Industrial revolution?
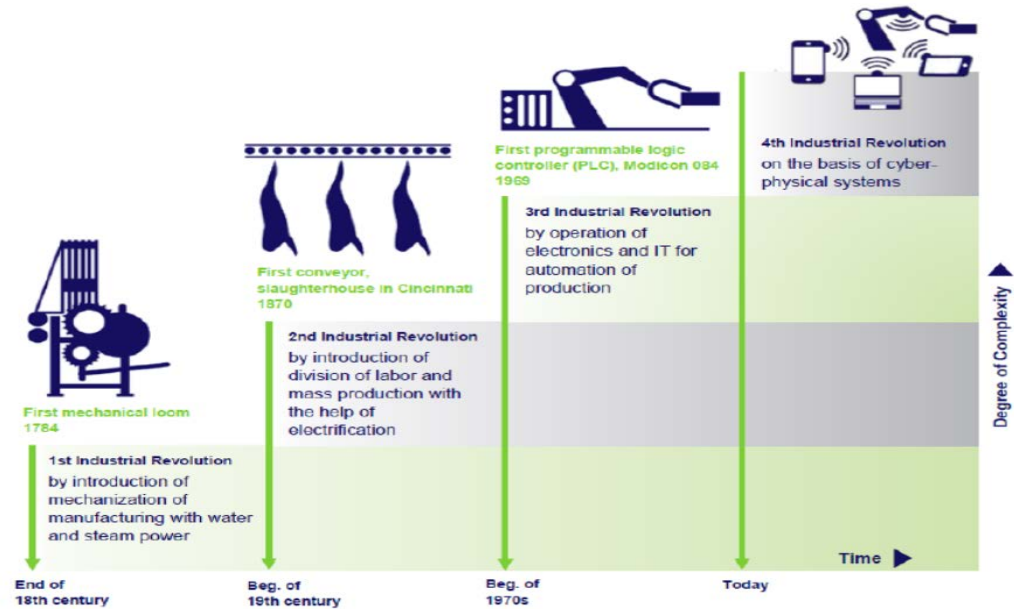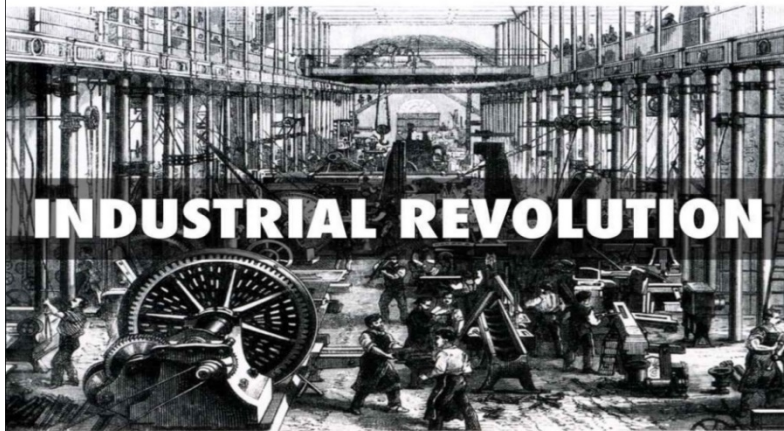
UAS Vision

Is there a vision?

Or are we just allowing them to fly?

What's happening

- To date Regulators approve:
  - Pilot
  - Aircraft
  - Operation (VLOS/BVLOS

- What about the ANSP?

- Approval for an operation without any real knowledge who is operating and where…..

ATM perspective

- ANSP manages the FIR

- Gnd to FL 600 (variations)

- Uncontrolled does not mean unmanaged

- Conservative environment

- ATM is:
  - ATS
  - ASM
  - ATFCM
  - UTM?

UTM

- Innovative

- Link to CNS Infra structure

- Safety perspective different from existing ATM

- Cloud based

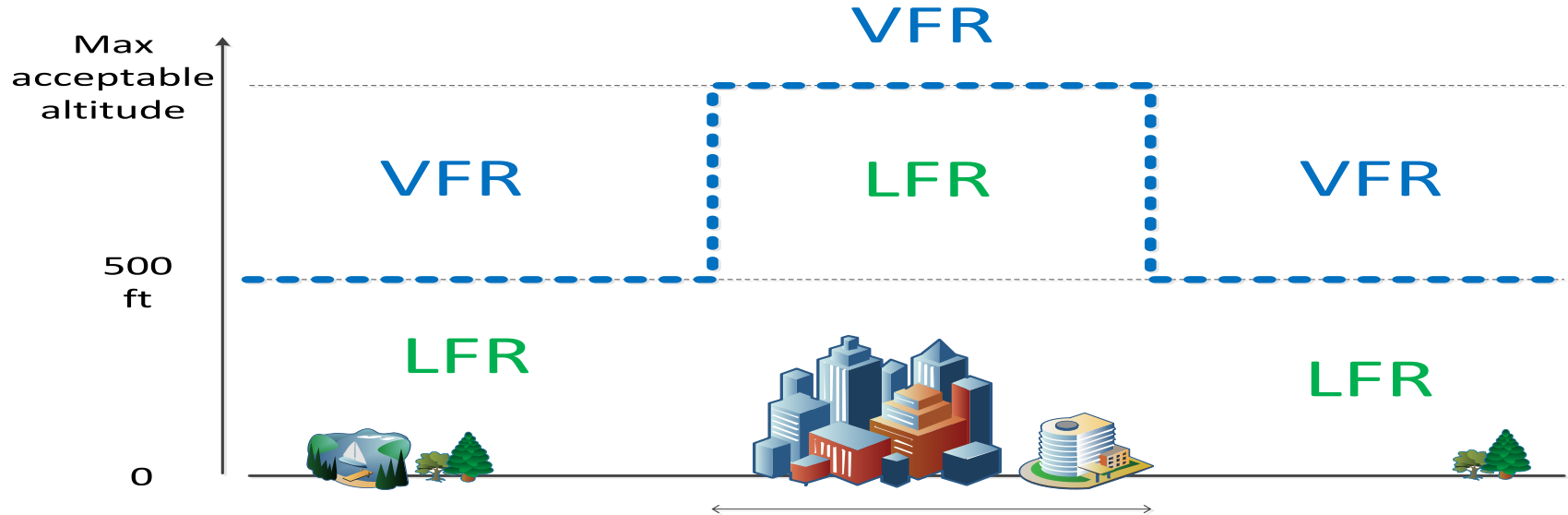- Robustness

BASIC INGREDIENTS ARE MISSING

- Common altitude reference system

- Flight rules for small UAS

- Airspace assessment

- Supporting infrastructure

- Coexistence with manned aviation

RULES of the AIR and Flight rules

No flight rules for sUAS
- VLOS-VLOS
- VLOS-BVLOS
- VLOS/BVLOS-VFR

Cities, town or settlements
(Annex 2 chapter 4)

Airspace assessment

- CNS requirements
- Common reference data
- Where can they fly and where are they able to fly

Small UAS Altitude Measurement& Reference Point

- Two main sources of discrepancy concerning manned/ unmanned aviation:
  - Usage of different reference points
  - Usage of different equipment for elevation measurement

- Two main areas of concern:
  - airspace close to the airports
  - upper limit of VLL (very low level) airspace

- *This has been discussed in various working groups*
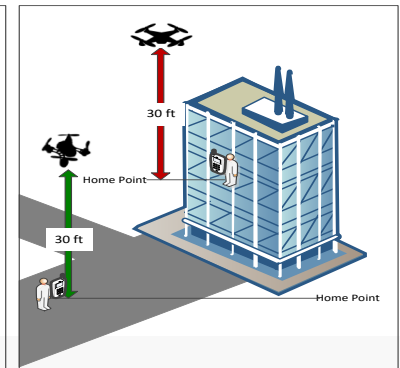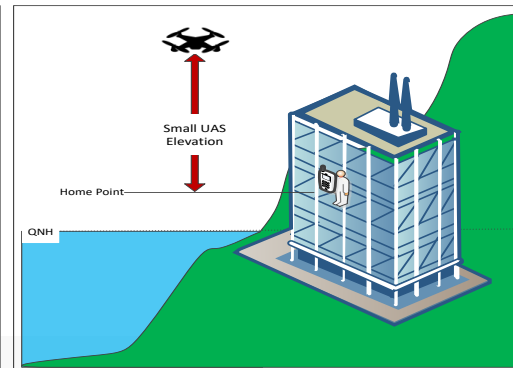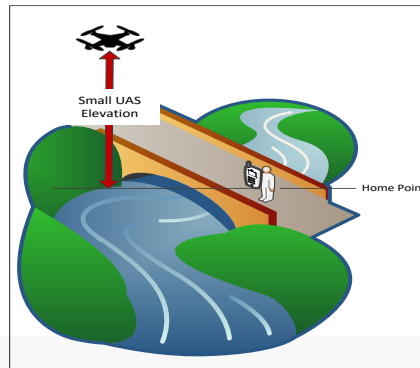
Sometimes it goes……
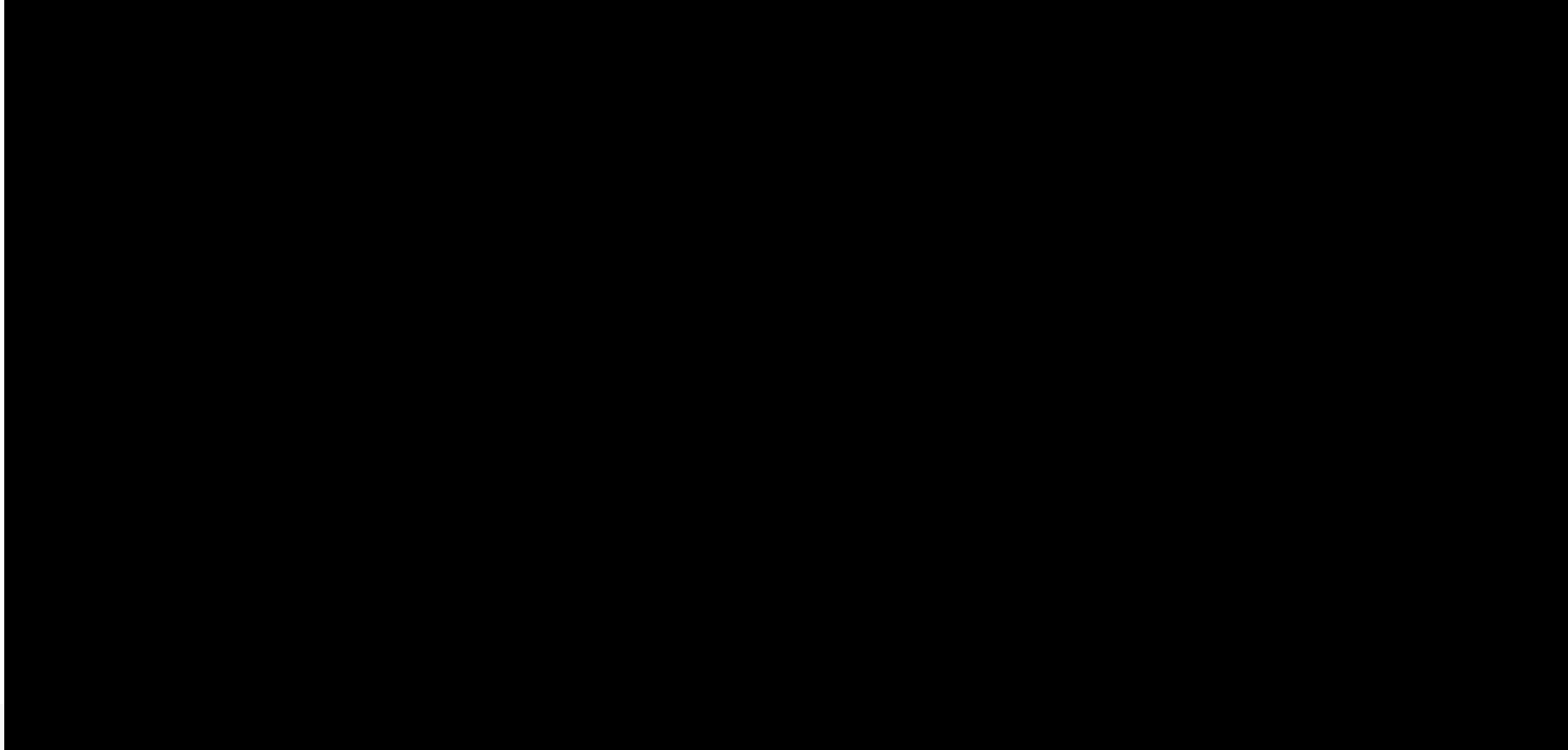
My perspective

- ATM remains responsible for FIR

- ANSP provides basic building blocks:

  - Data

  - Cloud

- UTM is a part of ATM (delegated responsibilities)

- Interoperability is key

- Investigate legal aspect of have several service providers in the same airspace

- Until basic ingredients are in place:

  - Segregation

THANK YOU

"TOGETHER TOWARDS SAFE INTEGRATION"