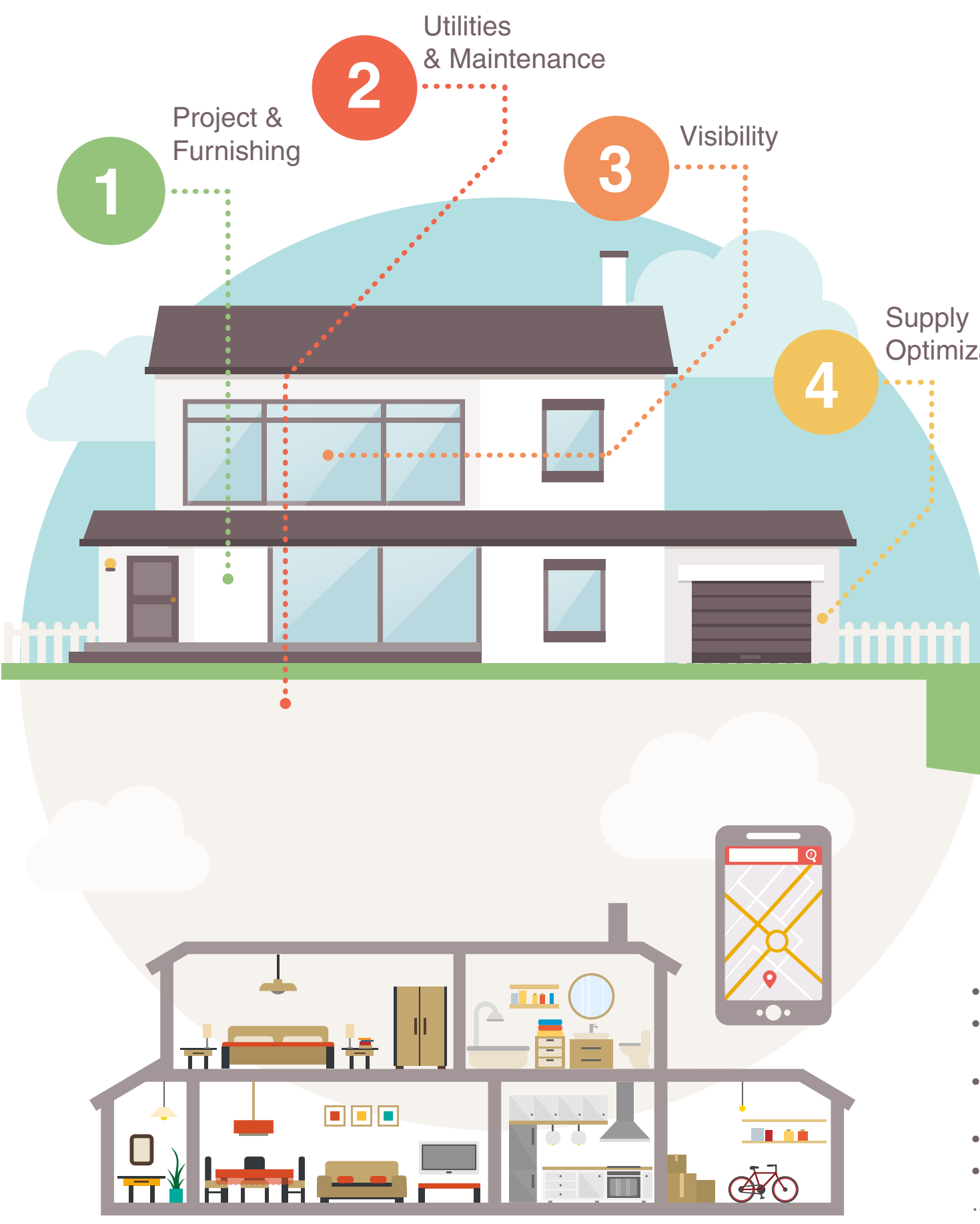


# INDUSTRY 4.0

## SMART HOUSE/FACTORY

### IN 5 STEPS



Just like in a house, the factory needs to complete each step to become "smart" and to make the operation fit for industry 4.0.

Until one step is complete, the next step cannot deliver full benefits.



### STEP 1 . MAP IT OUT

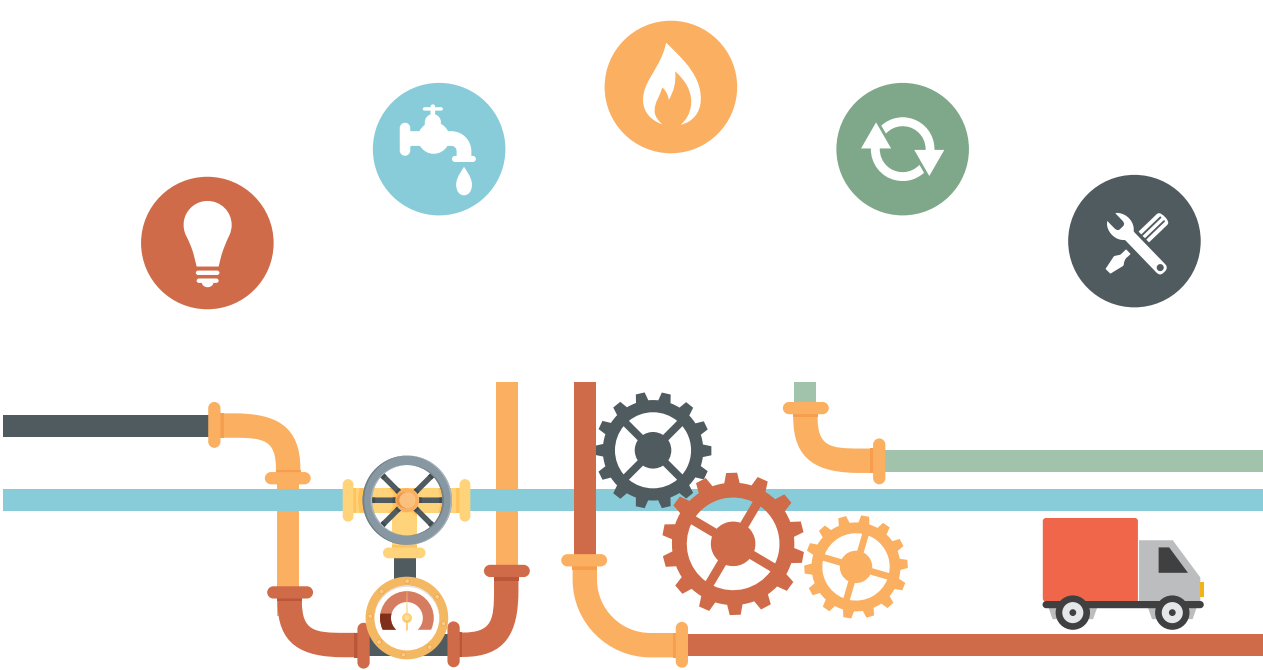
#### PROJECT & FURNISHING

- Location / address
- Architecture plan: foundations, walls, floors
- Gas, electricity & water installations
- Interior design
- Furnishing and equipment
- ...

#### MAPPING PHYSICAL PROCESSES

- Materials
- Equipment
- Routings
- Carriers & Tools
- Material Handling Systems
- Robots
- ...

### STEP 2 . UNDERSTAND FLOW



#### UTILITIES & MAINTENANCE

- Utilities: gas, electricity & water
- Periodic and unplanned maintenance (cleaning, routine repairs)
- Renewing, redecorating
- Upgrading equipment
- ...

#### MAPPING BUSINESS PROCESSES

- Production processes
- Engineering
- Quality
- Logistics
- Maintenance
- R&D (inc. NPI)
- ...

### STEP 3 . GAIN VISIBILITY



#### VISIBILITY

- Visibility: windows, sunlight, lighting
- Connectivity with outside world (TV, Internet, telephone)
- Smoke detectors, alarms, AC/heating system controls
- ...

#### REAL-TIME VISIBILITY

- Order status
- Equipment status
- Materials status
- ERP & PLM integration
- Real-time Analytics
- ...

### STEP 4 . OPTIMIZE OPERATION



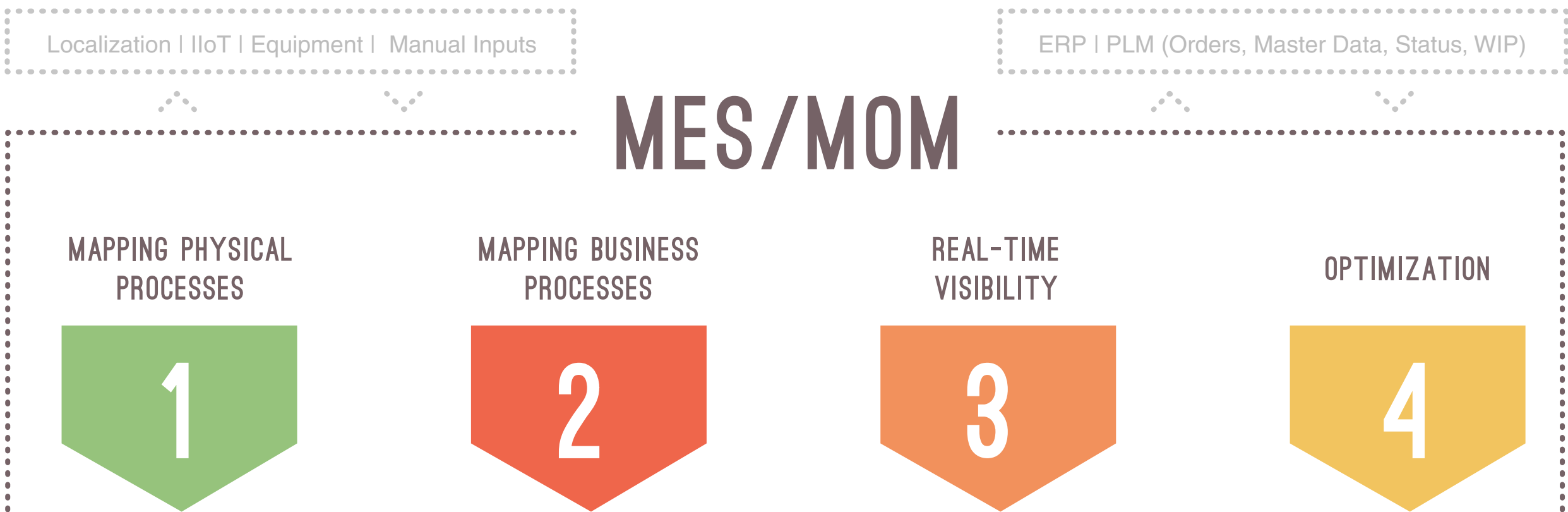
#### SUPPLY OPTIMIZATION

- Groceries
- Clothing & accessories
- Household cleaning products
- Healthcare, Hygiene & Cosmetic products
- ...

#### OPTIMIZATION

- Optimization
- Productivity
- APS
- Yield
- Quality
- ...

## READY TO EMBRACE NEW TECHNOLOGIES

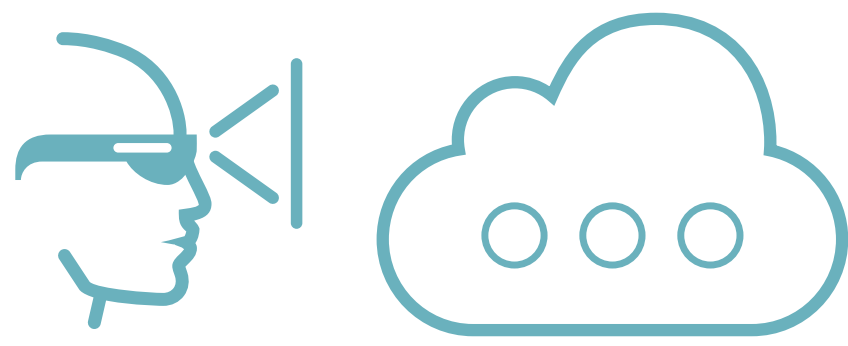


### STEP 5 . MAKE IT SMART

VIRTUAL REALITY

AUGMENTED REALITY

OFFLINE ANALYTICS



**BIG DATA** > Solutions to old problems  
**MACHINE LEARNING** > Solutions to new problems

- Descriptive > what happened?
- Predictive > what will happen?
- Diagnostic > how it happened?
- Prescriptive > what to do?

(Feedback, recommendations, decisions)

