

TRANSFORMATION THROUGH DIGITALISATION

JUERGEN DOLD, PRESIDENT HEXAGON GEOSYSTEMS



HEXAGON

POTENTIAL DIGITAL REALITY

REALITY OF LAUNDRY





REALITY 2.0



REALITY 3.0

REALITY 4.0

DIGITISE

DIGITALISE

```
self.active = True
self.active_y = False
self.active_z = True

#selection at the end -add back the deselected mirror modifier object
mirror_ob.select= 1
modifier_ob.select=1
bpy.context.scene.objects.active = modifier_ob
print("Selected" + str(modifier_ob)) # modifier ob is the active ob
#mirror_ob.select = 0
#one = bpy.context.selected_objects[0]
#bpy.data.objects[one.name].select = 1
except:
    print("please select exactly two objects, the last one gets the modifier unless its not a mesh")
```

----- OPERATOR CLASSES -----

Tool

```
operator):
    """the selected object"""
    x"
```



INVESTMENT

TAXES

AL

ACCOUNT BALANCE

CURRENCY

FINANCE

INQUIRY

CREDIT

TRANSFER

A

L

WHAT SHOULD BE

COMPLEXITY

RISK

ACCIDENTS

DELAYS

MISTAKES

AL



**CREATING
ENORMOUS
POTENTIAL**

DIGITISING CITIES



**DIGITISING IS NOT
EXCLUSIVE ANYMORE**



ABOVE AND BELOW



DIGITAL CITIES

2.5 QUINTILLION

2,500,000,000,000,000



3D WORLDS OF AI

```
...
    mirror_ob.select = 1
    modifier_ob.select = 1
    bpy.context.selected_objects[0]
except:
    print("please select exactly two objects, the last one gets the modifier unless its not a mesh")

```

AUGMENTED REALITY

SOLUTIONS THAT

MAKE OUR DATA

“STREET SMART”

```
----- OPERATOR CLASSES -----
Mirror Tool

class MirrorX(bpy.types.Operator):
    """This adds an instance to the selected object"""
    bl_idname = "object.mirror"
    bl_label = "Mirror"

    @classmethod
    def poll(cls, context):
        return context.active_object is not None

```



AUGMENTED REALITY

**WHAT IF WE COULD
SIMULATE ALL OF
OUR “WHAT IF’S”?**





ALL



**LIVES IN A
SHARING
ECONOMY**





**SHARING
ECONOMY**

```

#selection at the end -add back the deselected mirror modifier object
mirror_ob.select= 1
modifier_ob.select=1
bpy.context.scene.objects.active=modifier_ob
print("Selected " + str(modifier_ob) + " modifier is the active object")
#mirror_ob.select = 1
#one = bpy.context.selected_objects[0]
#bpy.context.object.name = "Mirror"
except:
print("please select exactly two objects, the last one gets the modifier unless its not a mesh")

----- OPERATOR CLASSES -----
Mirror To

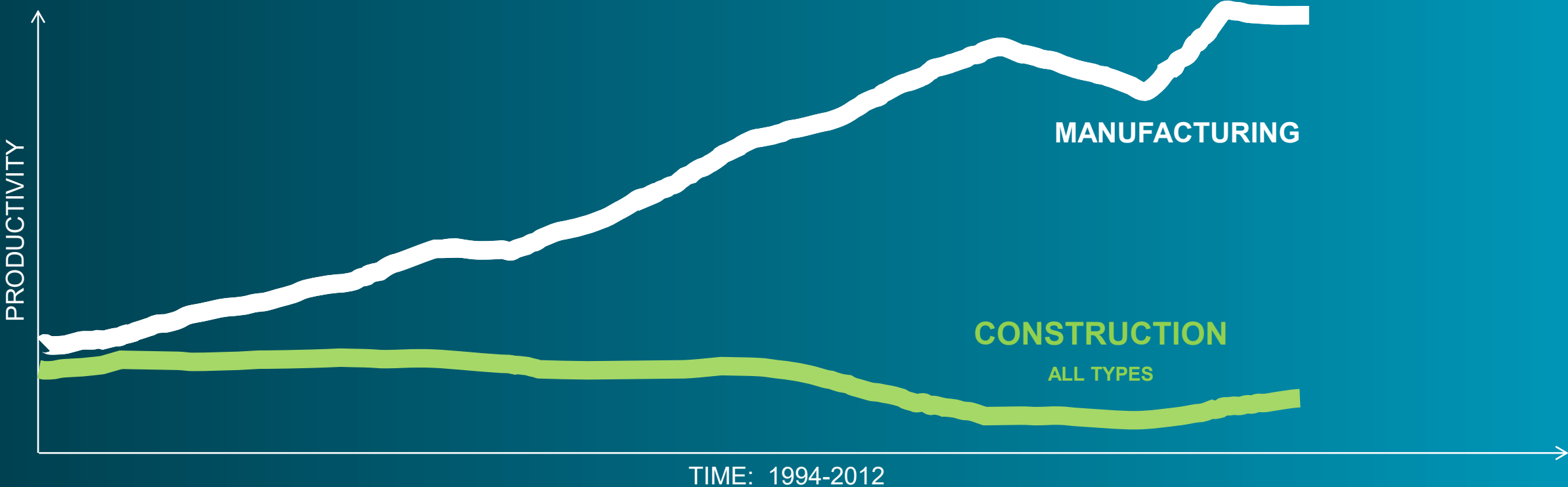
MirrorX(bpy.types.Operator):
"""This adds a mirror to the selected objects"""
bl_idname = "object.mirror_mirror_x"
bl_label = "Mirror X"

classmethod
def poll(cls, context):
return context.active_object is not None

```

DIGITALISATION OF THE CONSTRUCTION INDUSTRY

GLOBAL CONSTRUCTION PRODUCTIVITY HAS DECLINED

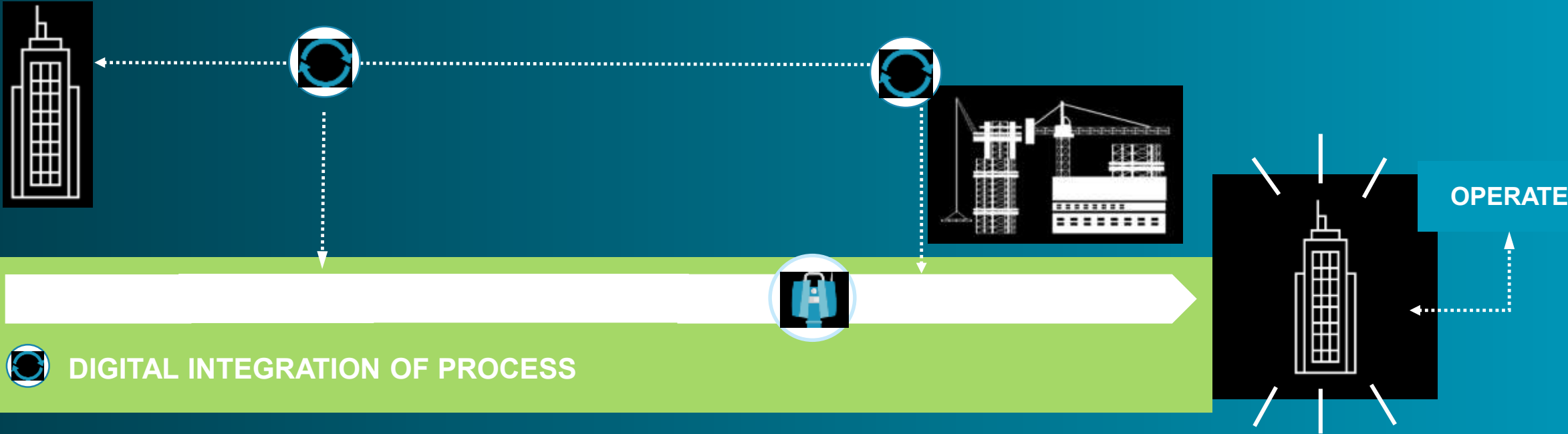


THE CONSTRUCTION ECOSYSTEM

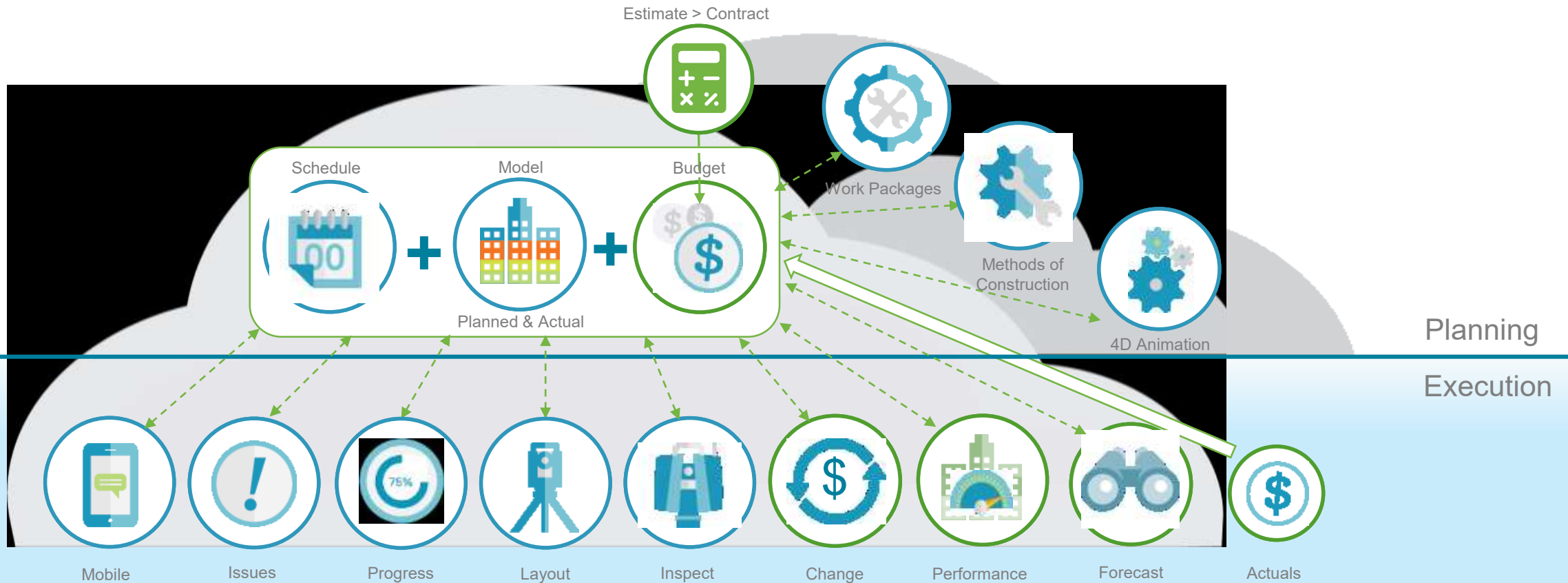
PRE-CONSTRUCTION

CONSTRUCTION

FINAL ASSET DELIVERY



HxGN SMART Build. Simply Smarter.





TRUE ASSUMPTIONS

```

#selection at the end -add back the deselected mirror modifier object
mirror_ob.select= 1
modifier_ob.select=1
bpy.context.scene.objects.active = modifier_ob
print("Selected" + str(modifier_ob)) # modifier ob is the active ob
#mirror_ob.select = 0
#one = bpy.context.selected_objects[0]
#bpy.data.objects[one.name].select = 1
except:
    print("please select exactly two objects, the last one gets the modifier unless its not a mesh")

```

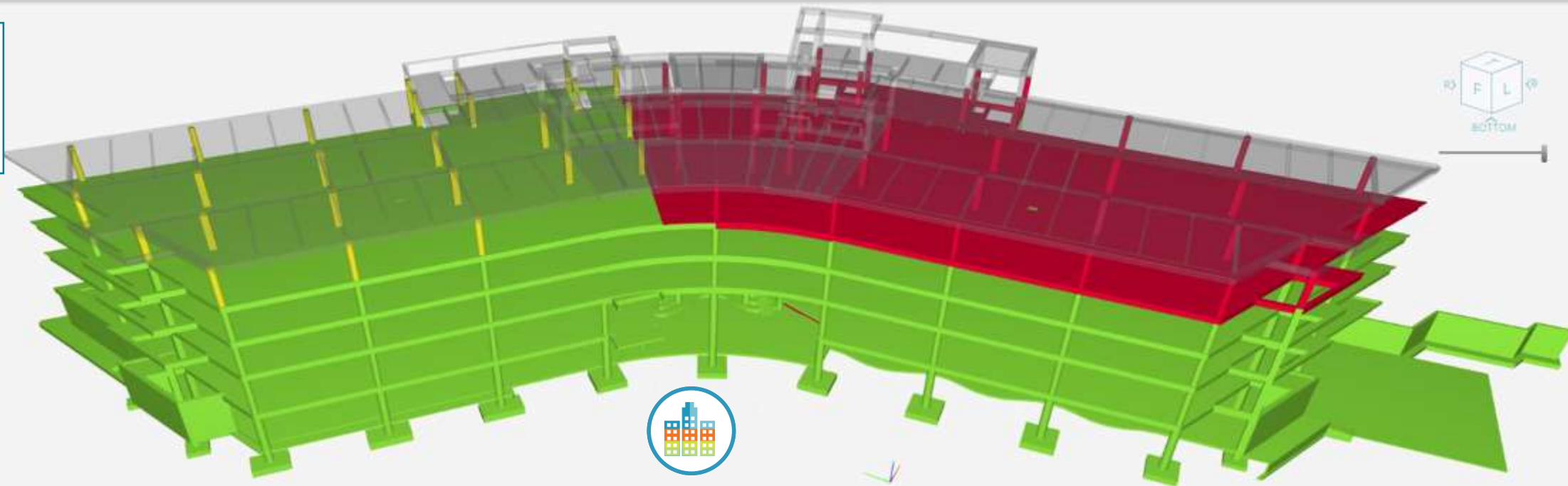
----- OPERATOR CLASSES -----

```

operator):
    """Apply the selected object"""
    for x

```

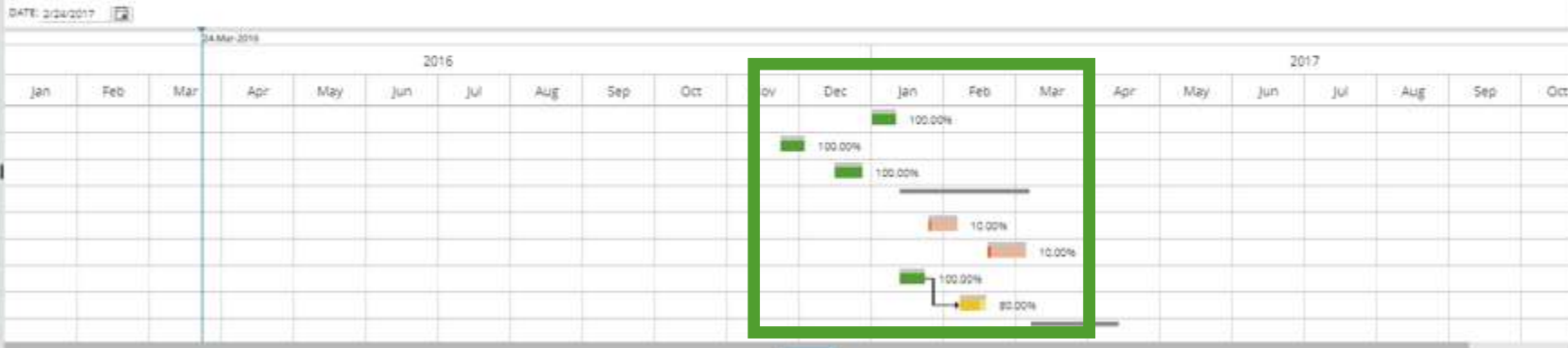
- On Time
- At Risk
- Late >20%
- Future



Visualize Actual Progress

SCHEDULING ENVIRONMENT

Work Breakdown



04_N_SLAB SYSTEM F/R/P

Properties

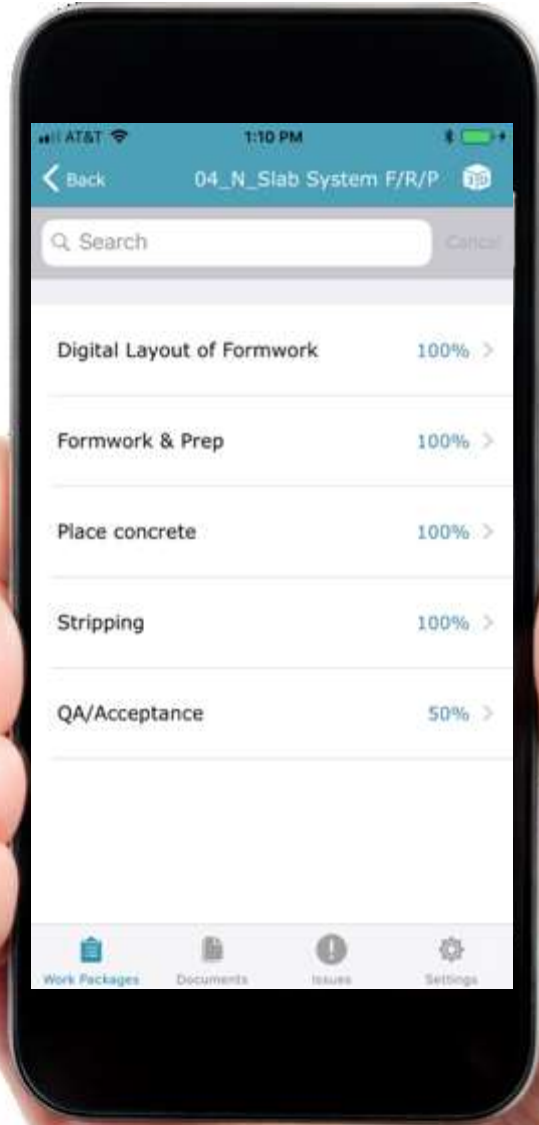
100%

WorkPackage Properties

| Name | Value |
|--------------------|------------|
| Activity Type | |
| Status | Active |
| Planned Start Date | 2017-01-13 |
| Planned End Date | 2017-01-24 |
| Weightage | 25 % |
| Planned Duration | 0 h |



Work Packages



Methods of Construction



Models



Mobile



LAYOUT

AS-BUILT CHECK

SYNC AS-BUILT POINTS

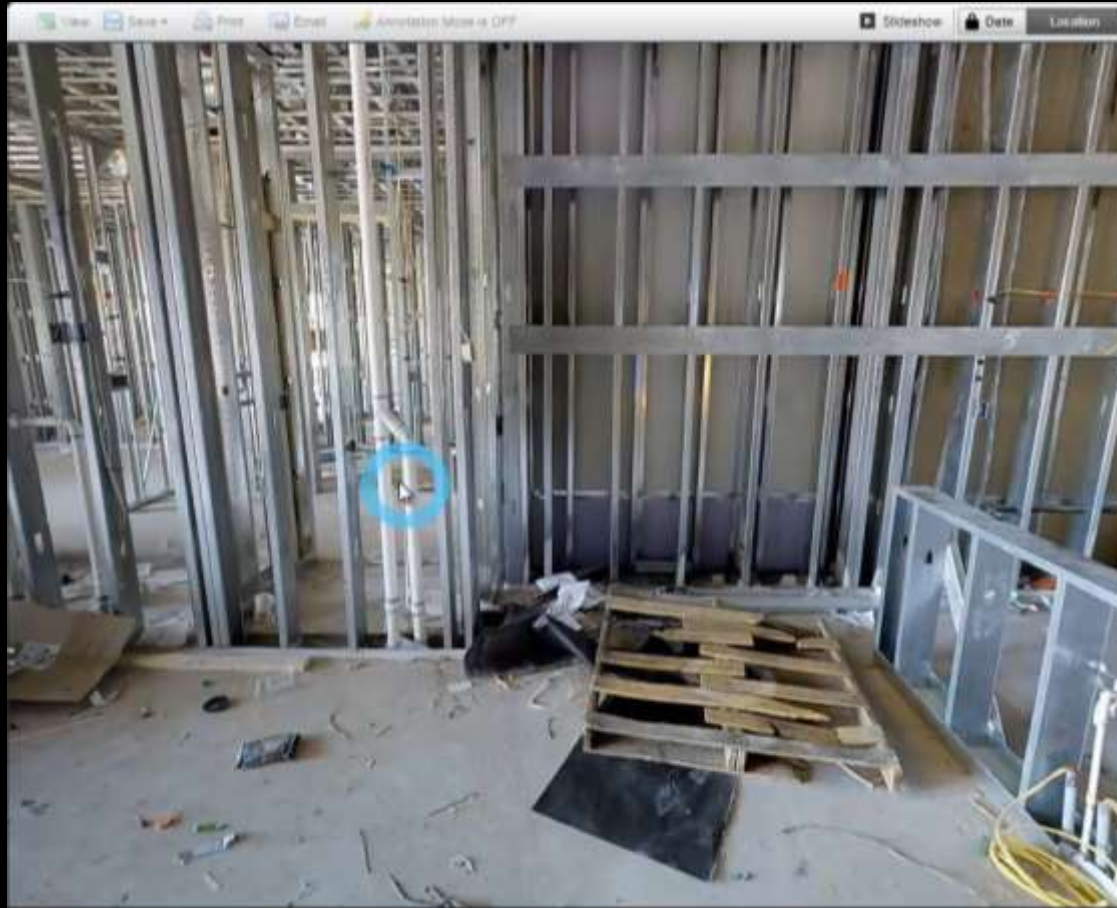
ROUND-TRIP POINTS

TOTAL STATION INTEGRATION



DISTRIBUTION PROGRAM'S DOCUMENTATIONS



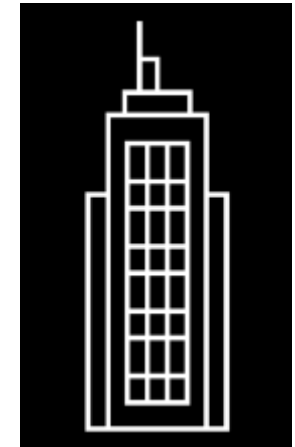
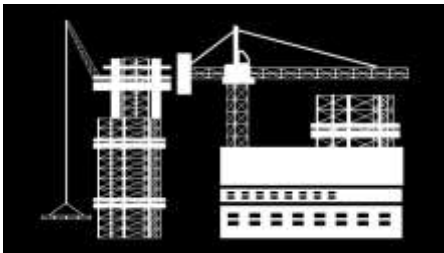


 **Multivista Services Demo**

Site-Walk 300 - MEP Exact-Built Photos
Mid-Rise Condo
June 9, 2015 - Photo 1



SIMPLICITY
CONNECTIVITY
INTELLIGENCE



A

L

**TWO LETTERS THAT
WILL CHANGE THE
WAY WE WORK**

FOREVER

DIGITISE





DIAGNOSTICS

DIGITALISE

AL EMBRACE IT.

TRANSFORMATION THROUGH DIGITALISATION

