

# Subjectification of UK and Russian Smart Cities Workshop

## Seeding Smart Cities

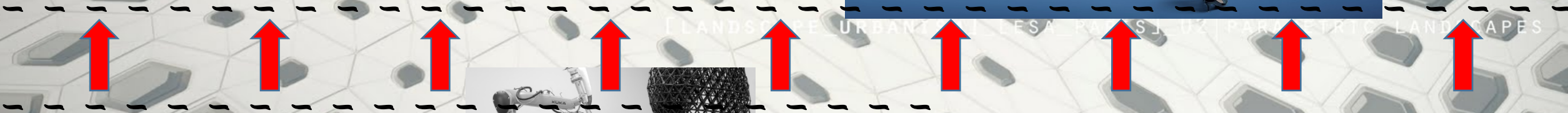
Adonis Haider

A.Haidar1@Salford.ac.uk



# Smart Technologies, Smart Methods, Smart Processes

Smart Cities



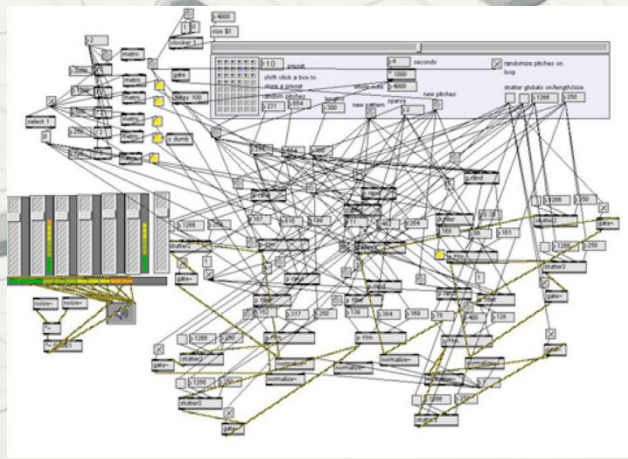
Smart Technologies



Smart Methods



Smart Processes

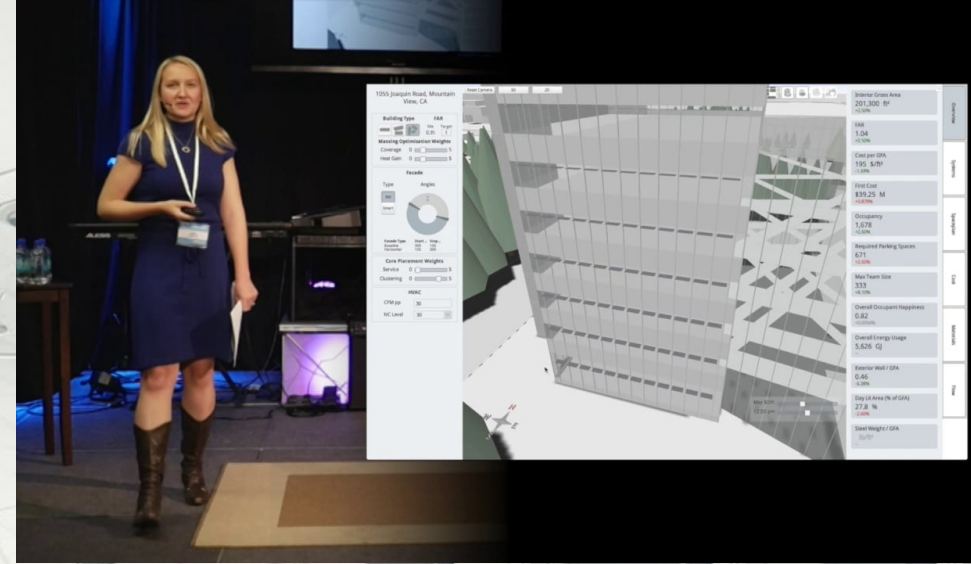
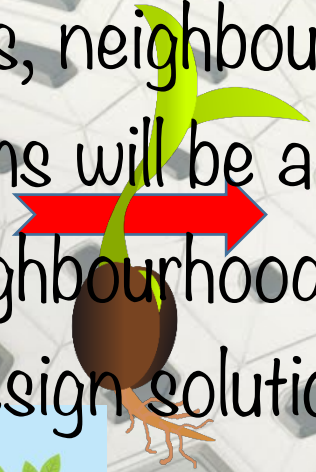




# Building Seeds

Volker Mueller (2011)

“designers will be able to develop behaviour models with generative capabilities, which will be used to ‘seed’ sites, neighbourhoods or cities with ‘germs’. The germs will be able to automatically populate sites, neighbourhoods and cities to grow design solutions”



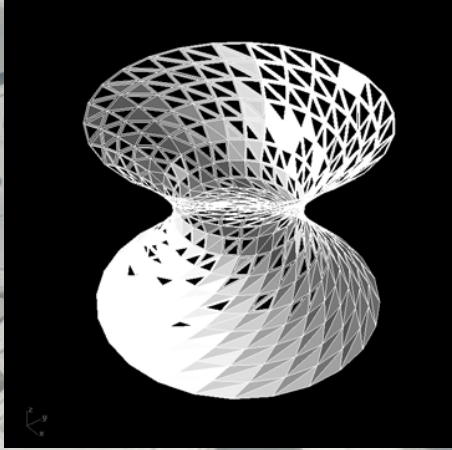
Jen Carlile; co-founder of Outerlabs.io

In architecture, each project is designed from scratch following the same process. Inspire from nature — Seeds and trees

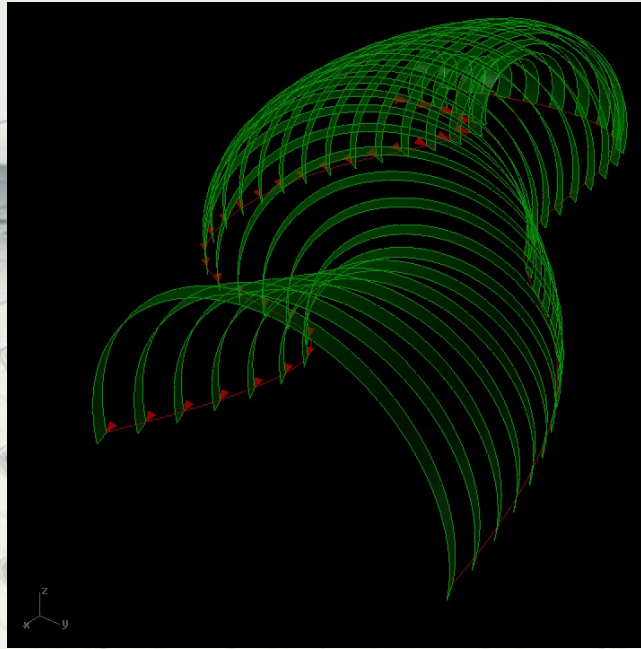




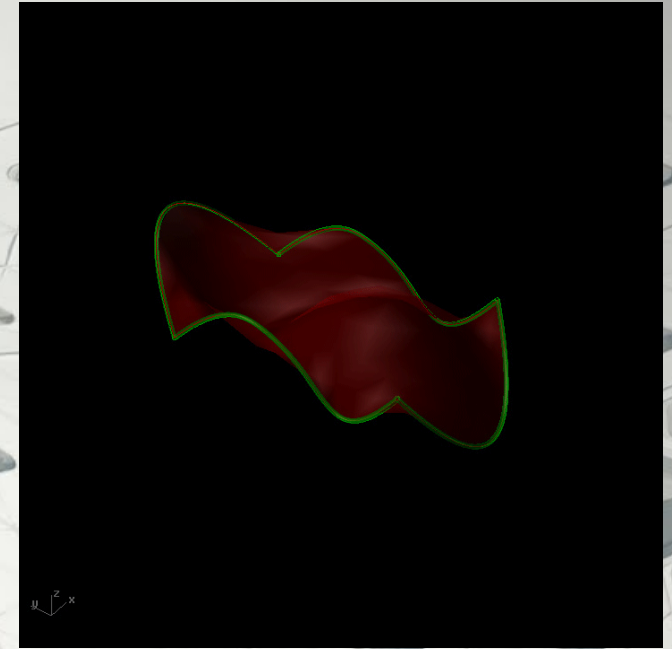
# Parametric Design



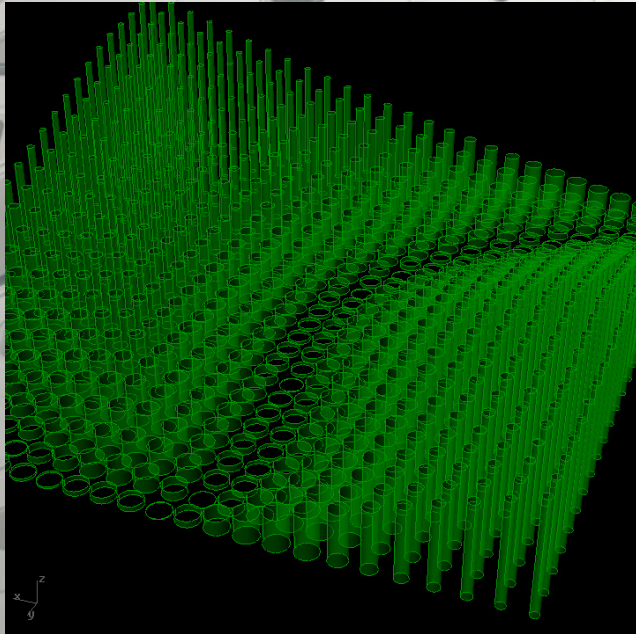
<http://parametric-design.blogspot.co.uk>



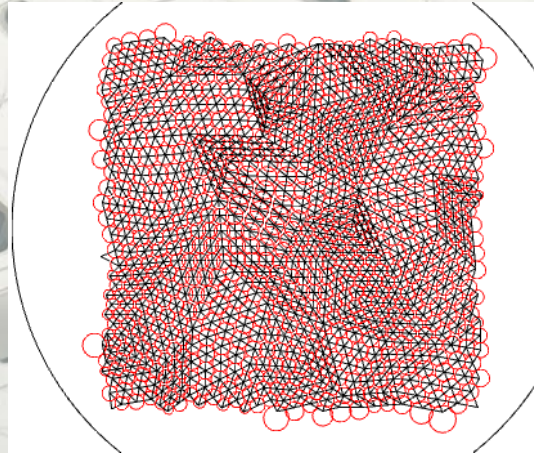
[parametricmodelling.wordpress.com](http://parametricmodelling.wordpress.com)



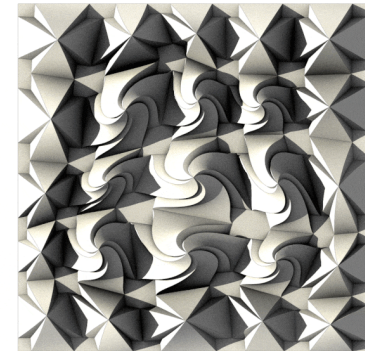
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[www.pinterest.co.uk](http://www.pinterest.co.uk)



<http://www.parametricdesign.net/>



# Parametric Design

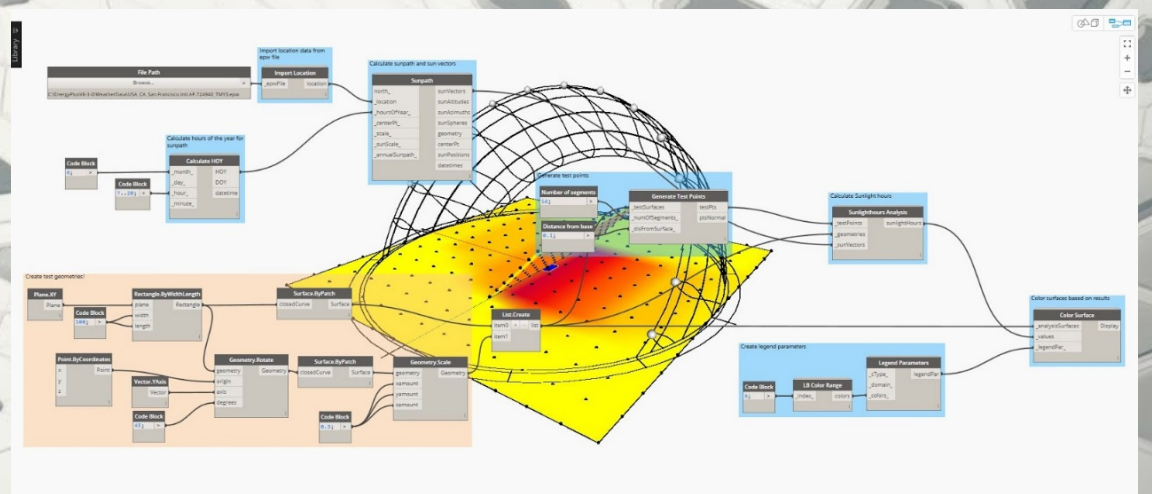
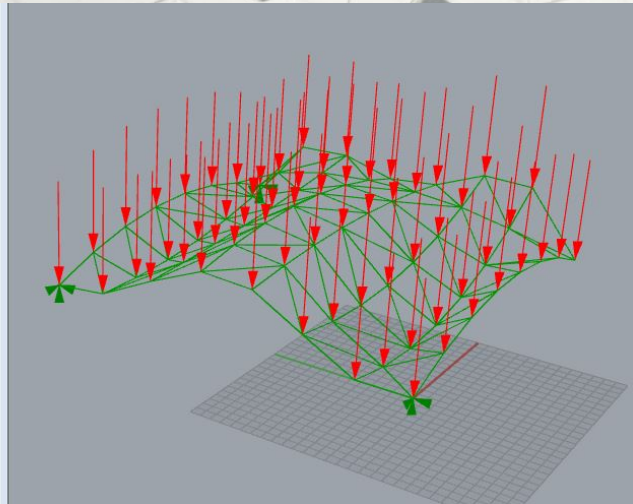
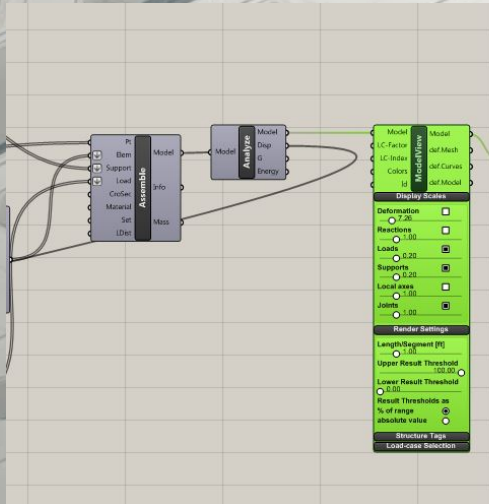
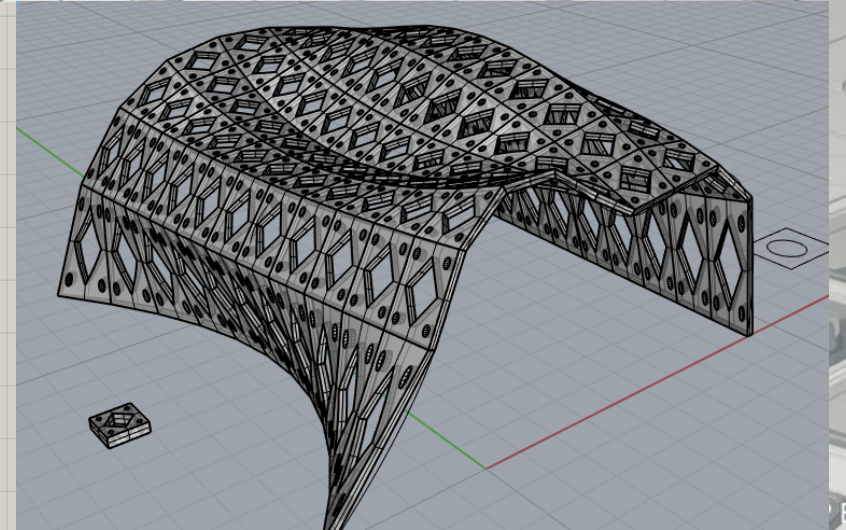
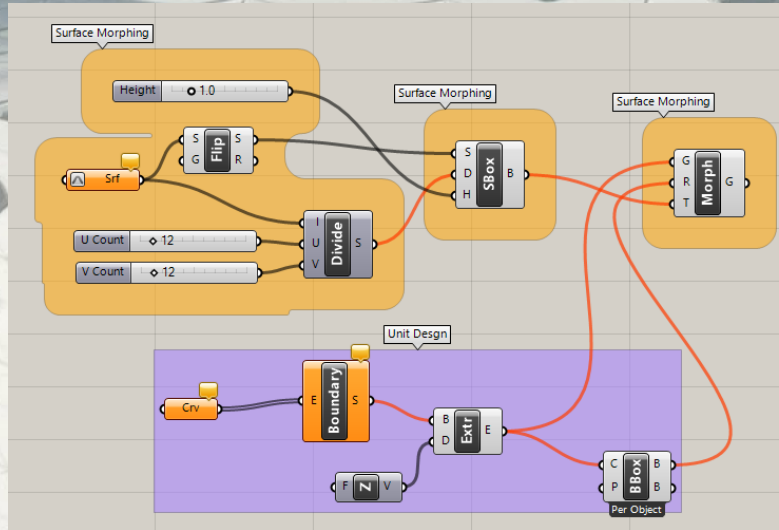


**Rhino**  
NURBS modeling for Windows

+



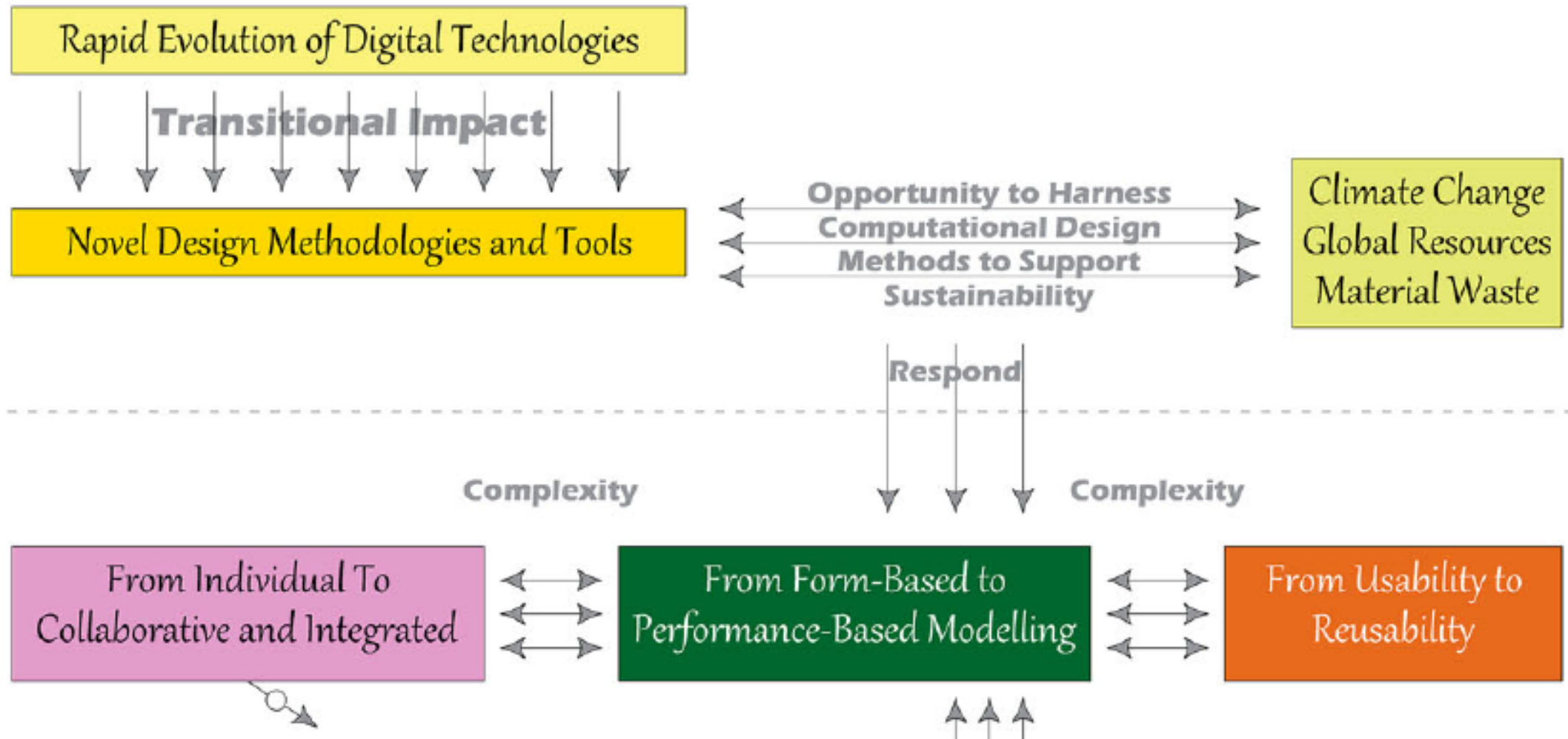
**grasshopper**



Karamba 3D: <http://ming3d.com>

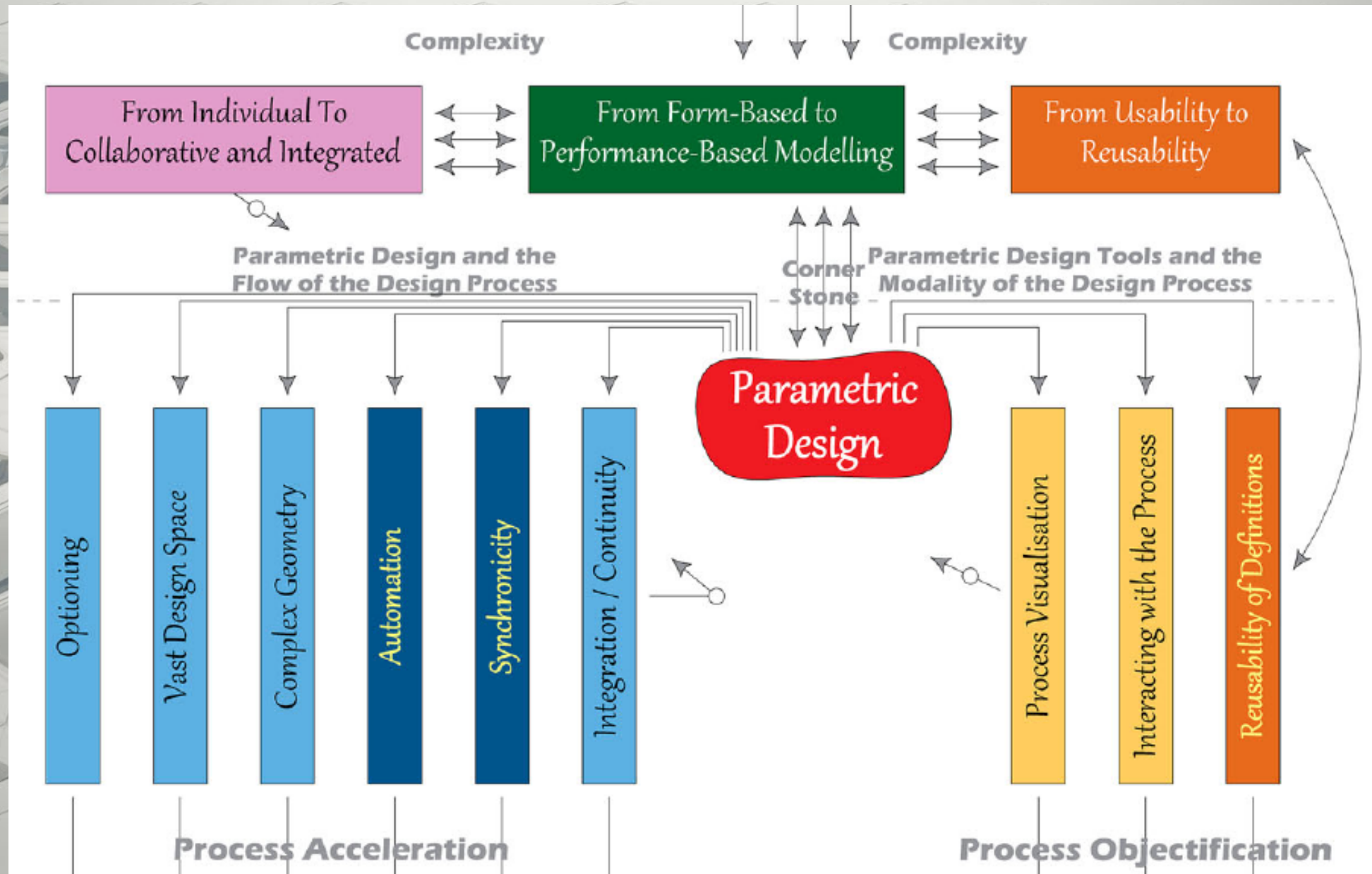
Ladybird 3D: <http://www.grasshopper3d.com>

# Seeding Smart Cities

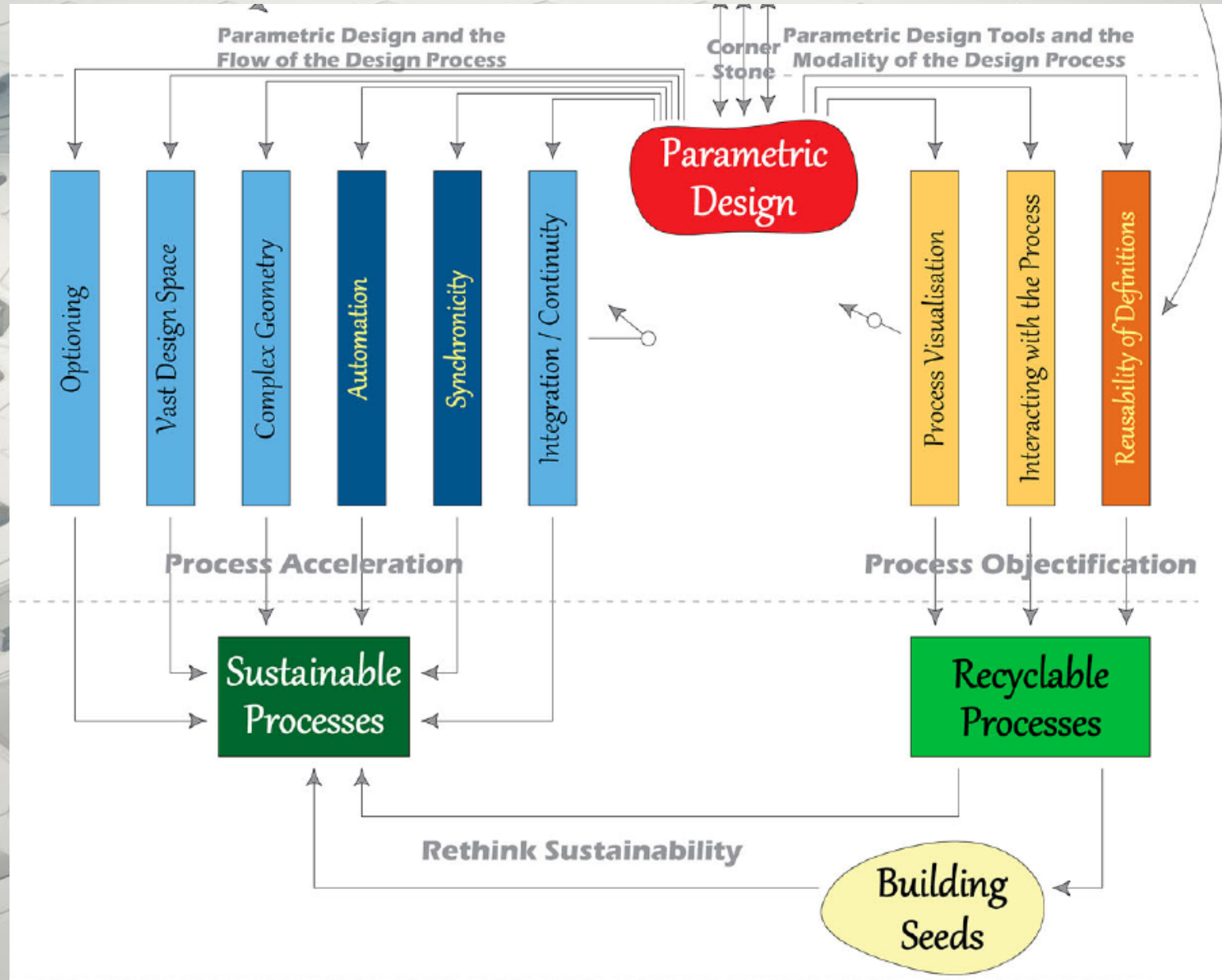




# Seeding Smart Cities

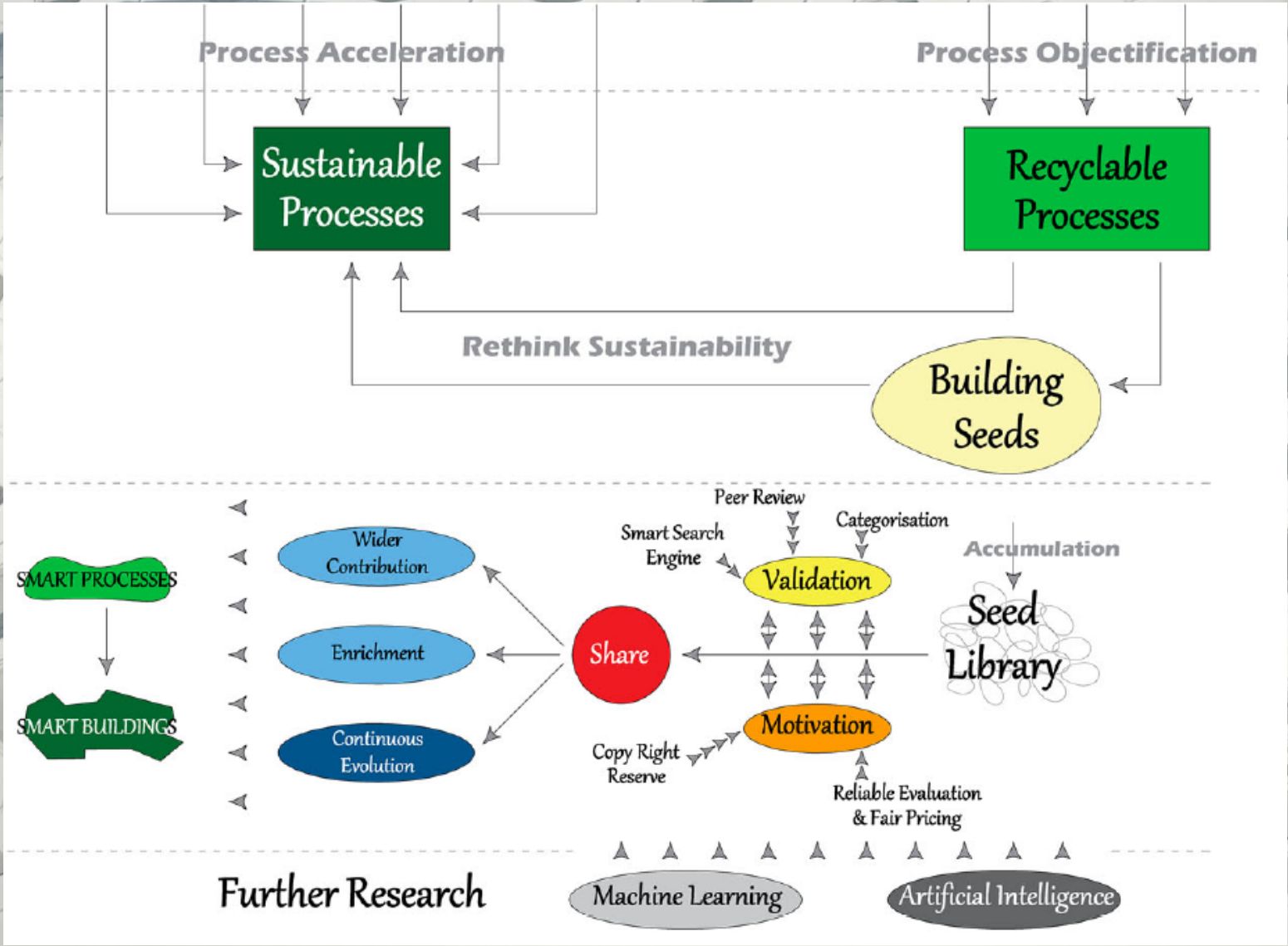


# Seeding Smart Cities





# Seeding Smart Cities



# For More Details

Haidar, A., Underwood, J., & Coates, P. (2019). Smart processes for smart buildings: 'sustainable processes', 'recyclable processes' and 'building seeds' in parametric design. *Architectural Engineering and Design Management*, 1-28.

