Remaking Cities Congress

Pittsburgh, PA

October 16-18, 2013

Major Partners

Remaking Cities Institute,
Carnegie Mellon University

The American Institute
of Architects

Designing the Modern City as an Urban Lab for Creativity;

Lessons Learned from Collaborative Problem-Solving and Innovation

Thanassis Rikakis
Vice Provost for Design, Arts and Technology
Carnegie Mellon University

Connected,
Dynamic,
High Dimensional,
Diversity
and the Innovation Hubs of the Future

- design for a high dimensional future
- avoid the pitfalls of low dimensionality
- diverse ecosystems are more resilient

Diversity of Values

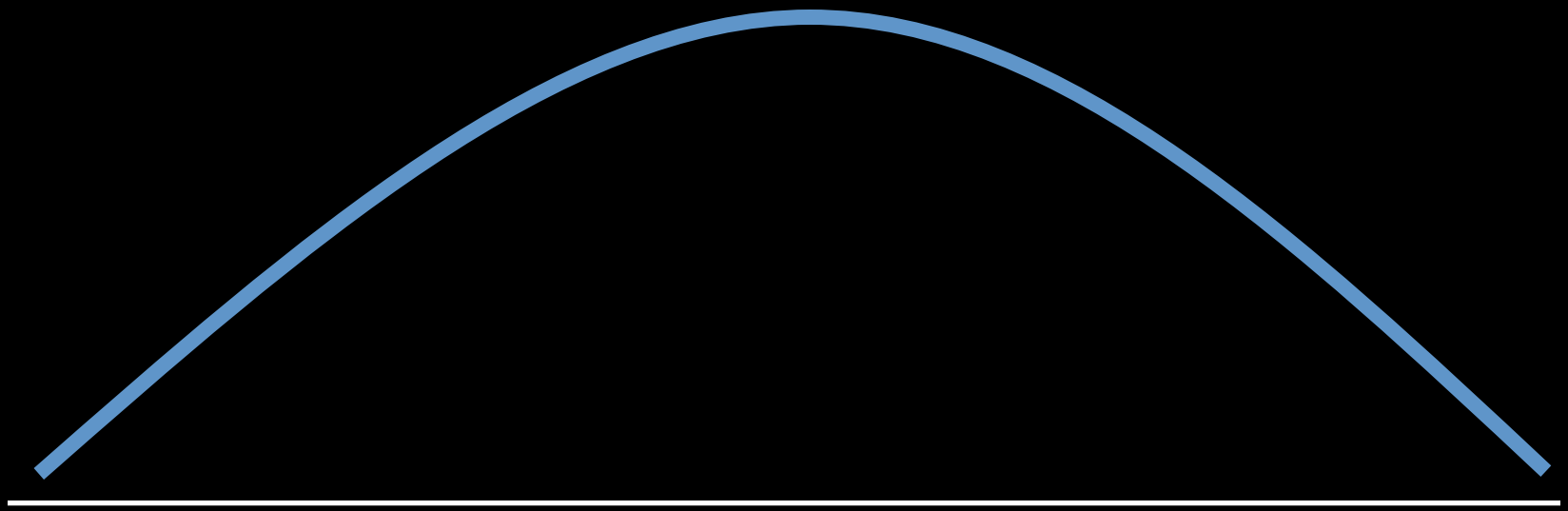
- A socio-cultural system that flattens value hierarchies
- What are the living and learning ecosystems that promote diversity/high dimensionality of values
  - reverse the rise of financial gain as the predominant value
  - recognize and promote all facets of life
    - emotional and rational
    - quantitative and qualitative
    - experiential and analytic
    - create for the joy of the process and for the value of product
    - connect for expanding your experience and your network
  - express the importance and the limits of the individual
  - celebrate the power of dynamic connectivity
  - embrace dimensionality and entropy

Tighter (Human Scale) Loops

- between acting and reflecting
  - reflective technologies
- between the virtual and the physical
  - towards and enhanced physical reality
- between giving and receiving
  - intellectual property is common but not free
  - the No Ah rule
- between producing and consuming
  - the rise of the pro-sumer economy
- between the expert and the amateur
  - aspirational structures
- between common and individual
  - a multi-scale approach to globalization
- between bottom up and top down

Design for Normal Distributions

The 21st Century activity will be a normal distribution across many dimensions



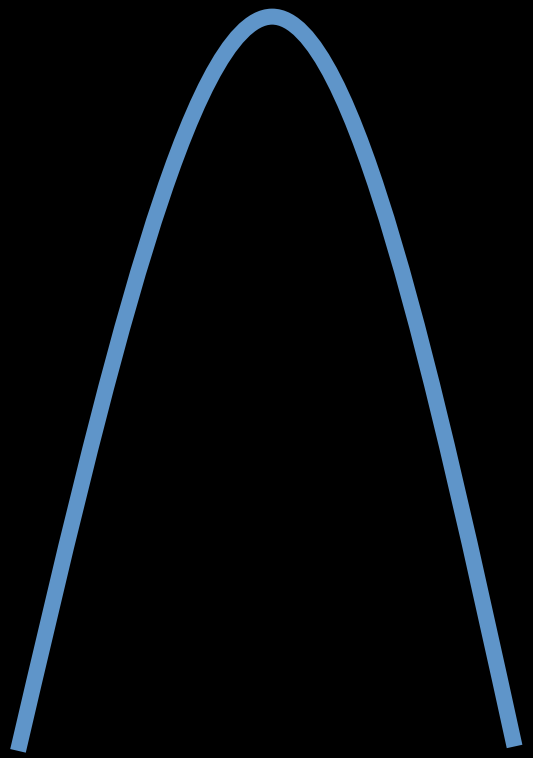
Individual	Team
Proprietary	Common/porous
Local	Global
Physical	Digital
Qualitative	Quantitative
Experiential	Analytic
Consumption	Production
Action	Reflection
Giving	Receiving
Bottom up	Top down

The 21st century design will not be represented by ideal points

individual

team

The 21st century activity will not be represented by narrow distributions



individual

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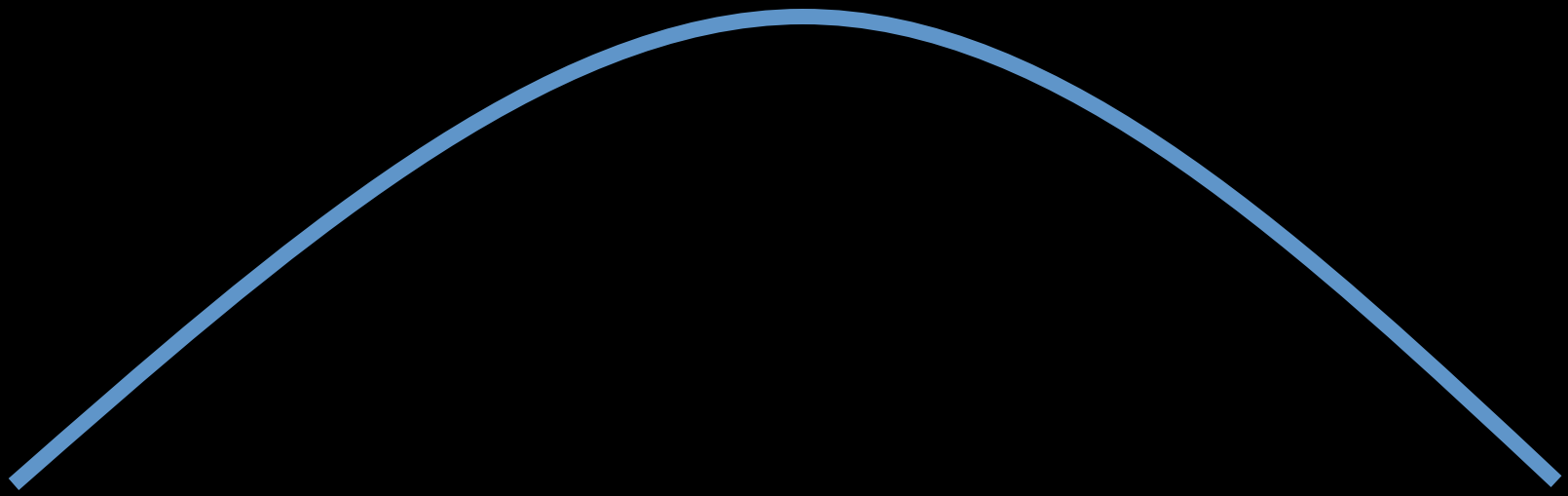

Individual
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Team
Common/porous
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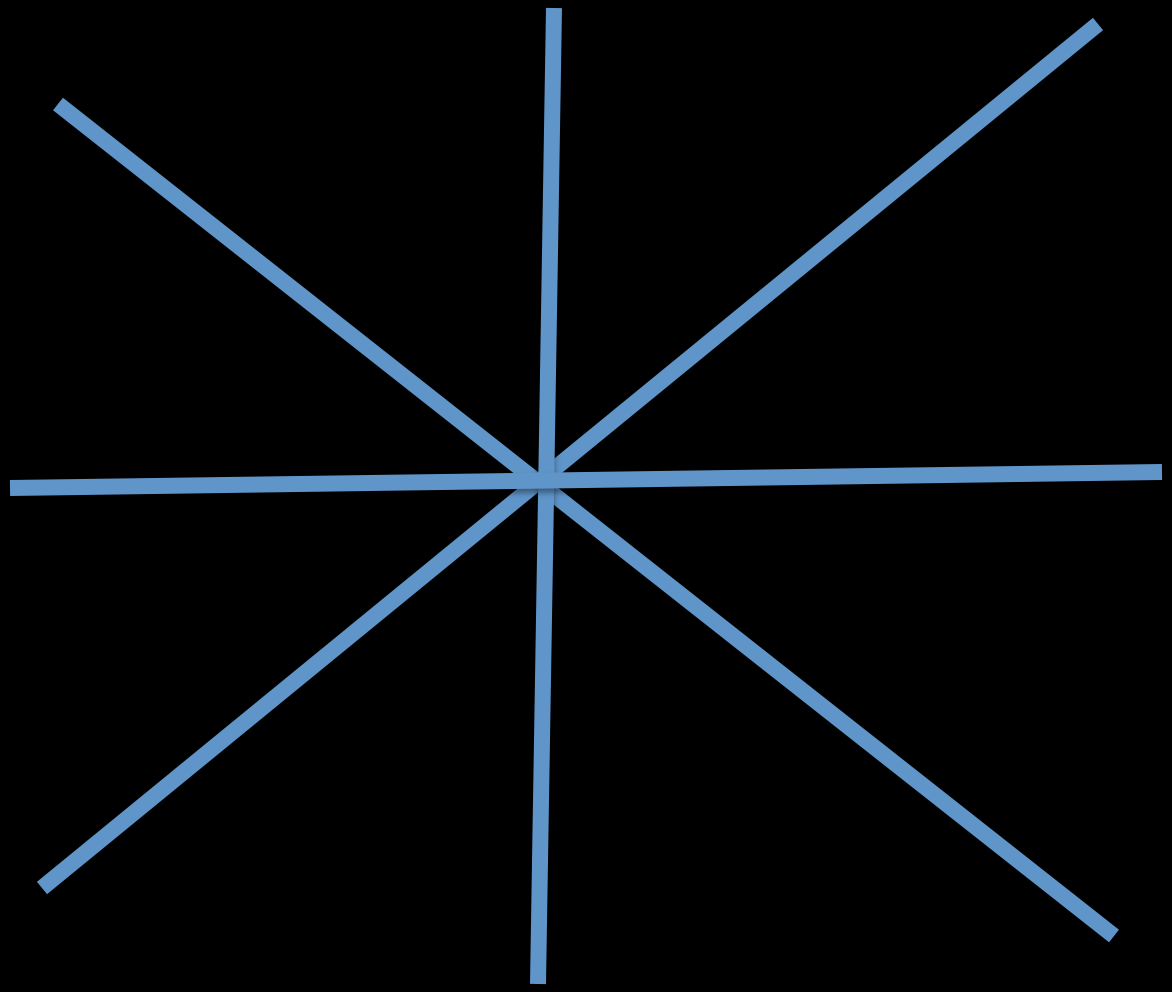
Production
Reflection
Receiving

How to Design for a multidimensional space of normal distributions ???



What is the function for a normal distribution?

- Maximum Entropy
  - It expresses dynamic highly variant situations
  - Not for causal or deterministic structures
- But symmetric around the mean
  - Plan for the middle
  - Can not ignore outliers

$$f(x) = \frac{1}{\sigma\sqrt{2\pi}} e^{-\frac{(x-\mu)^2}{2\sigma^2}}$$

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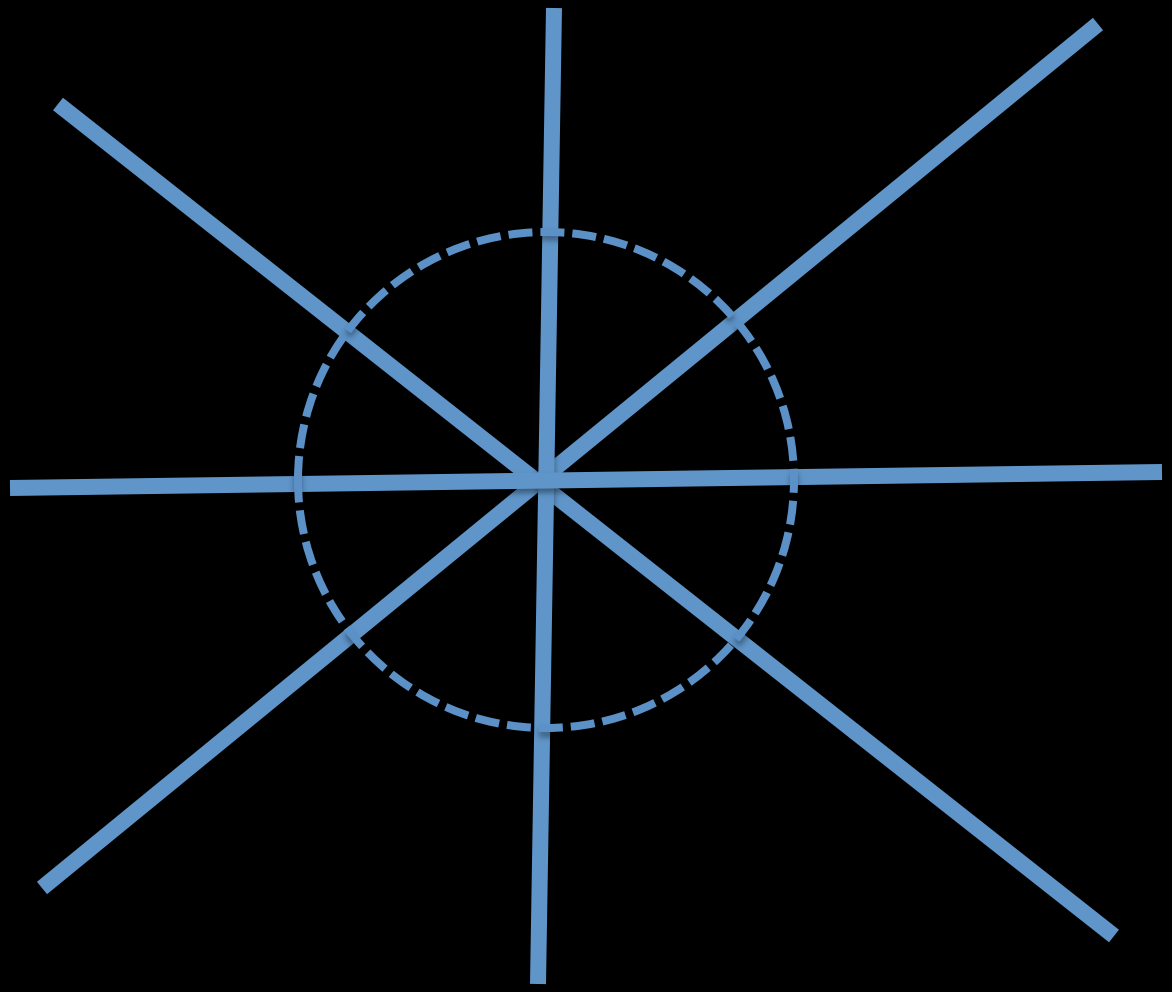

Design an adaptive architecture not a structure

- Where the final experience at any time “t” is defined by the user(s) not the designer