Rural Design and the New Economy

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A Future Farm

Incorporating features designed to help cope with the negative impacts of climate change and exploit the opportunities. This illustration shows some priority adaptation measures that have been developed with stakeholders who have agreed they are cost-effective and feasible. Many of the measures will only be suitable for certain types of farm, in certain locations or circumstances, but together will help address some of the key risks of climate change. To allow inclusion in the illustration some features are shown closer together than they might ideally be situated.

**Changes to crops**
- Diversification of crops grown (e.g., olives, grapes) to make the most of longer growing seasons and reduced frost. Changes to existing varieties, planting and harvest times to cope with hotter, drier summers.

**Land management**
- Improved land management to prevent soil erosion and ensure drainage can cope with increased rainfall, e.g., by planting trees/hedges and creating sustainable drainage such as porous surfaces and ponds.

**Improved technology**
- Advances in technology will enable farmers to apply pesticides and fertilizers only where needed, improving efficiency and reducing pollution from increased rainfall.

**Livestock management**
- Trees planted to provide shade for animals, act as a source of renewable fuel, windbreaks and provide woodland habitat. Improved livestock housing to cope with warmer summers (by reducing heat stress in animals) and provide protection from storms and flooding. Diversifying pasture and reusing feeding areas around the farm to keep livestock off waterlogged fields.

**Crop and water storage**
- Improved facilities for storing and drying crops to cope with increased or new pests and wet conditions. Rainwater captured and stored for use around the farm.

**River and flood plain**
- Rivers given space in which to flood (e.g., farm and catchment levels), with buffer strips of grass, trees and/or shrubs created next to watercourses to reduce pollution during heavy rainfall and serve as habitats for wildlife.

**Combined heat and power plant**
- Combined heat and power plant used to save money, reduce emissions and increase energy security. Powered by wood grown on the farm and used to heat neighbouring crop storage facility.

**Farm shop / cafe**
- Shop to sell home-grown produce, raise public awareness of sustainable farming, and café to take advantage of increased domestic tourism.
Design Thinking

• An empathetic, participatory way of engaging communities in envisioning possible futures
• A method that elicits the most creative ideas from those most affected by a situation
• An iterative, analytical process that lets the best ideas evolve
• A rapid prototyping process that encourages experimentation and learns from failure
The Current Paradigm Shift

• Moving from a mechanistic to a web-like or networked view of reality
• Moving from print media to digital media, recognizing that the media is the message
• Moving from hierarchical, command-and-control cultures to flat, participatory ones
• Moving from a culture of expertise to one that values broad input and co-creation
The third industrial revolution

A 14-PAGE SPECIAL REPORT

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Worldwide cover
First Industrial Revolution

- 19th Century through early 20th Century
- Mechanization of Hand Labor on the Farm and in the Factory
- Rise of Industrial Cities and also Industrialized Small Cities and Towns
- Beginning of Large-scale, Production Farming
Second Industrial Revolution

- Early 20th Century through Early 21st Century
- Beginning of assembly-line production not just of goods, but food and other commodities
- Rise of large, hierarchical corporations mass producing goods and services
- Rise of suburbs, big-box retail, and mass consumer culture
- Industrialization of farming
Third Industrial Revolution

INNOVATION MARKS THE SPOT
Total utility patents granted between 2000 and 2011

- SEATTLE 26,359
- PORTLAND, OREGON 17,641
- BOISE, IDAHO 15,969
- MINNEAPOLIS 28,088
- ROCHESTER, NEW YORK 14,407
- BOSTON 40,195
- NEW YORK CITY 61,587
- SAN FRANCISCO 54,205
- SILICON VALLEY 89,547
- CHICAGO 31,751
- DETROIT 25,293
- PHILADELPHIA 22,481
- LOS ANGELES 49,193
- PHOENIX 14,438
- WASHINGTON, D.C. 16,061
- AUSTIN 22,916
- ATLANTA 14,381
- DALLAS 23,230
- HOUSTON 21,035
Small and midsized cities have added jobs at a faster rate than large cities.  (Joel Kotkin, Michael Shires, *Forbes*, 5/1/2012)

Smaller cities will constitute well over half of the world’s urban growth.  (Richard Dobbs et al.” Urban World” McKinsey Global Institute, 4/2011)
From Mass Production and Consumption to Mass Customization
From Passive Consumers to Consumers also Being Producers
From Separated to Integrated Living, Working, and Making
From moving Bites of Information rather than Goods or Bodies
From Carbon-based Economy to a Renewable Economy
Innovation Rules

• Attract innovators and encourage innovation

• Education is key to innovation, so partner with ed institutions

• Focus on per-capita innovation not the total amount of it
Build Networks/Webs

• Connect everything you have in new ways

• Focus on building networks locally and globally

• Think Big, Start Small, and Move Fast!
Mass Customize!

- More distributed and collaborative economy
- More adaptable and immersive education that’s life-long
- More flexible, less expensive provision of goods and services
Utilize What You Have

- Integration of living, working, and making
- Walkable communities with a diversity of people and activity
- Use existing infrastructure more efficiently
Conserve Resources

• Use renewable energy as much as possible
• See every person and nature itself as our greatest assets
• Leverage the desire of people to contribute
Local and Global

• Foster local culture of innovation but aspire to have a global impact

• Take on a global issue and do it more innovatively than others

• Be the place that others around the world want to mimic
• Foster local culture of innovation but aspire to have a global impact
• Take on a global challenge and do it better than anyone else
• Be the place that others around the world want to mimic
Focus on Quality of Life

• Economic development comes in not attracting industry, but attracting mobile talent

• Offer qualities that the megacities cannot match

• Quality, not quantity, matters
Design your Future

• Develop on-going community processes that engage everyone

• Encourage pilots, embrace creative solutions

• See that people and environment are your best assets
“In smaller cities in particular, anchor institutions such as universities and governments have provided a buffer against economic whiplash.” (USA Today study, 2/1/2011)

“College towns are a refuge from the boom and bust of the private market” (Robert Lang, University of Nevada Las Vegas)