

The background of the slide is a light blue network diagram. It features a central red sphere connected to several yellow rectangular nodes. These nodes are further connected to other nodes, some of which are blue. Several stylized human figures in business suits are standing on the yellow nodes, holding briefcases, suggesting a professional or business context. The overall theme is interconnectedness and technology.

Steps toward a “normal” technology adoption market for Distributed Energy

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 - Member SGIP Smart Grid Architecture Committee
 - Chair of Open Building Information Exchange
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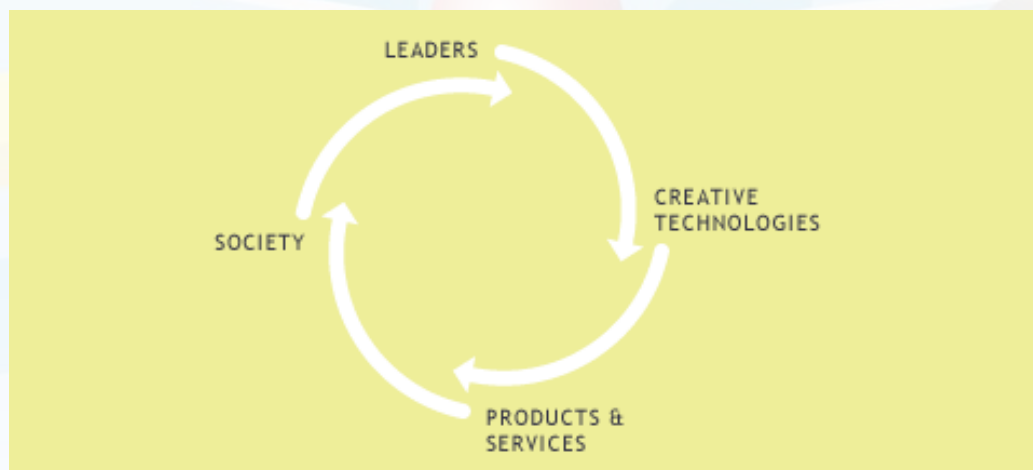
Energy Goals require a “dotCom” pace of disruptive innovation to succeed



Lack of consumer acceptance and understanding is a persistent barrier to roll-out and acceptance



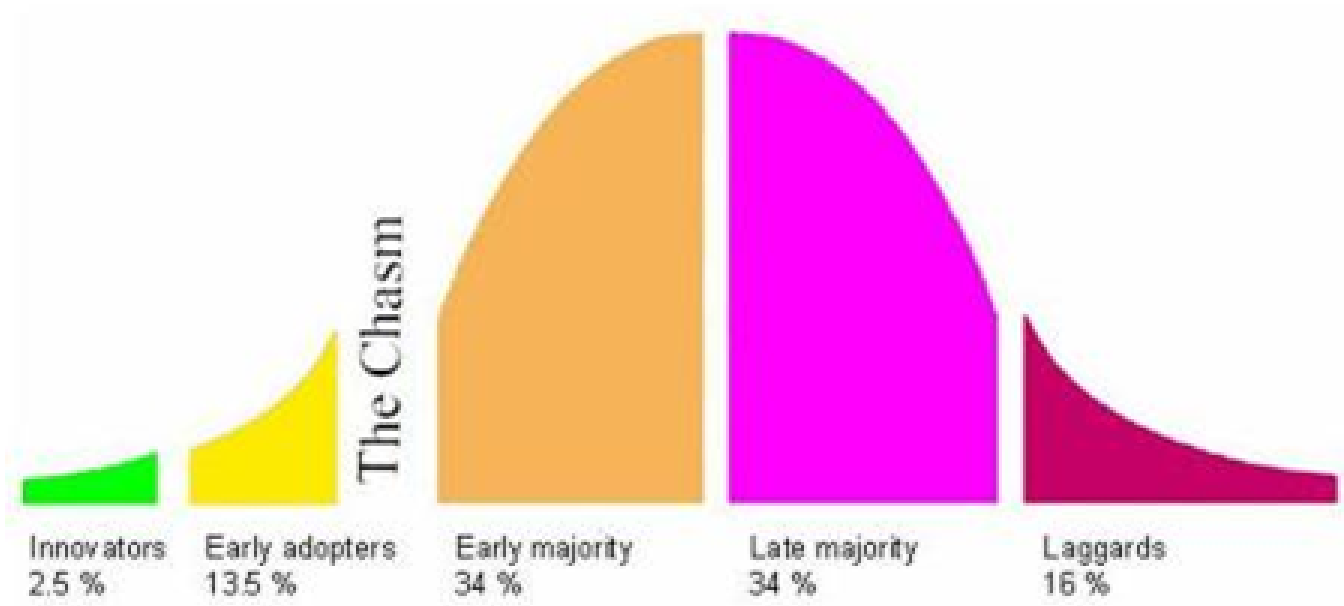
Accelerate innovation acceptance to build virtuous market that supports rapid innovation and supports creative destruction



Background on Markets that accept Innovation

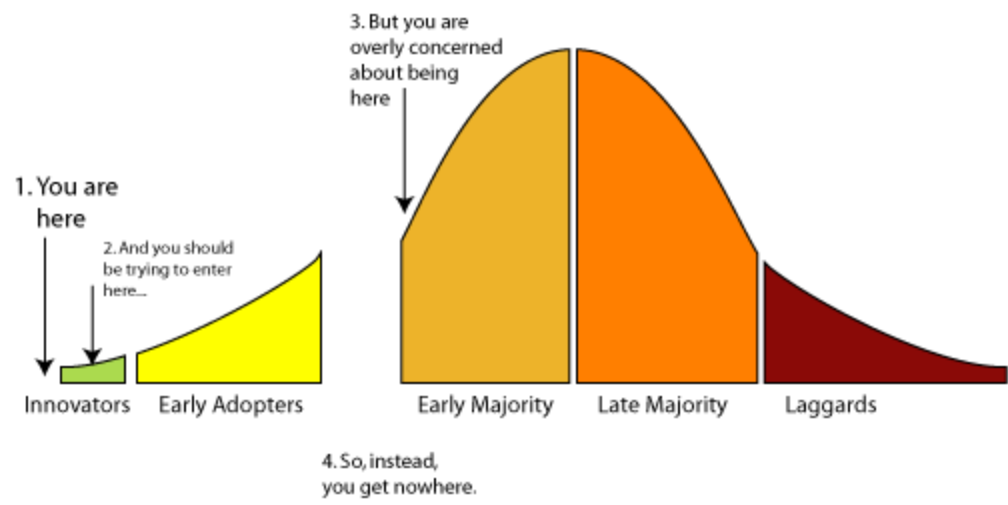


Rogers Innovation Adoption Curve as described by Moore

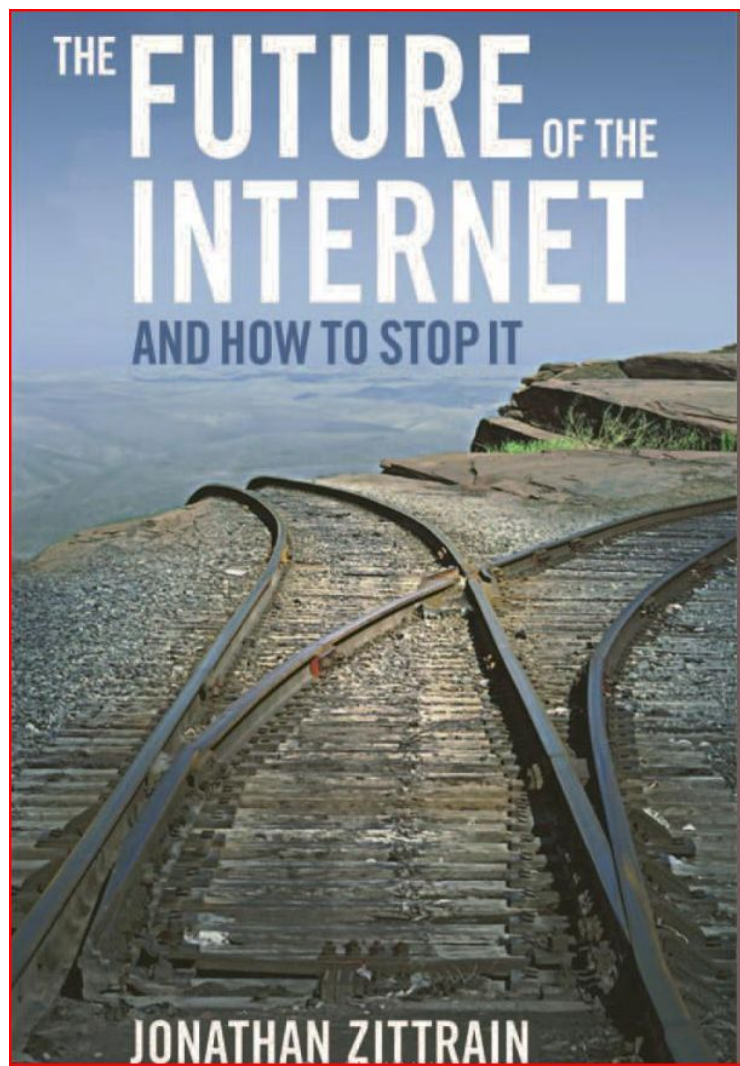


Do not try to bypass the chasm

Miss Rogue's Currently Frustrating Chasm Dialogue
circa 2006



Without dynamic open technology, energy is a non-generative closed system



You cannot find the future by perfecting today.

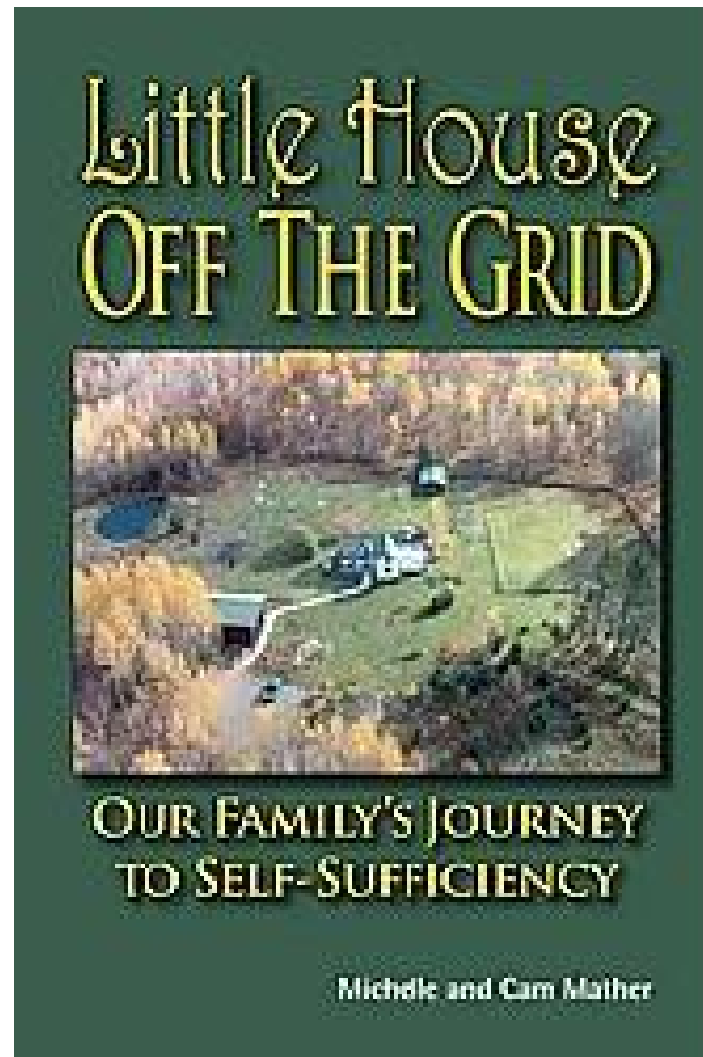
Consumer Innovators discover the new markets

They are the breeding ground for new ways to assemble services from existing technology. Often [Consumer Innovators] offer their ideas to their suppliers, who may reject them because there is “no market for that”.

Von Hippel et al.



I went to the woods because I wished to live deliberately...



What can I learn from the beans, or the beans from me





Why should we study the Early Adopters of Smart Energy



Key approach of IDEA: the fungibility of energy

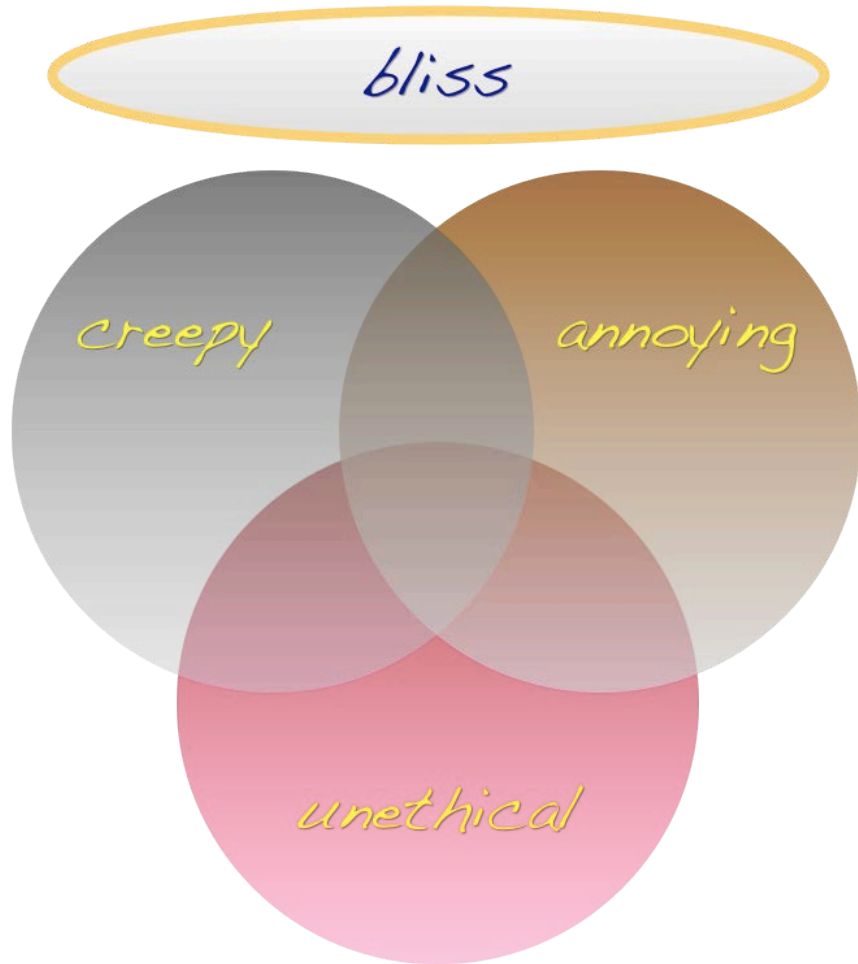
- Manage micro-grids not only of power, but of thermal energy, both hot and cold.
- Often tied to close-knit communities of shared purpose, e.g., college campuses and military bases. Managers of these systems use their local knowledge of requirements and purpose to optimize energy allocations within a system.
- Aim at these Early Adopters to find sizable customers able to accept volatile energy supplies. Pairing mid-scale intermittent power sources with such facilities can develop the business models used until they scale down to smaller facilities and simpler business models.

Learning from the Conservation and Anti-Consumerist Early Adopters

- Colleges and universities feel that leadership in this area increases yield rates on applications, and thus create a competitive advantage in attracting better students.
- The consumers driven by the esthetic and “green” values, but more bound to conventional life-style choices than the small footprint Innovators.
- The Tiny House movement.

Some Tiny House products have rejected the minimalism of this sector to construct highly sensed, highly automated systems. Using the advantages of central assembly, on-site generation, water collection, and occupancy sensing to create self-sufficient homes. As of yet, these homes are not “grid-aware”.





- Venn diagram of customer reactions to the use of private operational data

To gain acceptance for smart energy, and support the smart grid, aim at the right people

- Watch what innovators like and why they like it
- Communicate like today's innovators do
- Don't prevent the future to perfect today





- OASIS Energy Market Information Exchange
 - Price and product definition/description
 - Transactional EMIX Notes
 - Committee Specification pending publication
 - <http://www.oasis-open.org/committees/emix>
- OASIS Energy Interoperation
 - Designed to work to, from, inside, and outside microgrids
 - Committee Specification ballot in process
 - <http://www.oasis-open.org/committees/energyinterop>