

How disruptive 'Agents' will change your business overnight

Some food for thoughts

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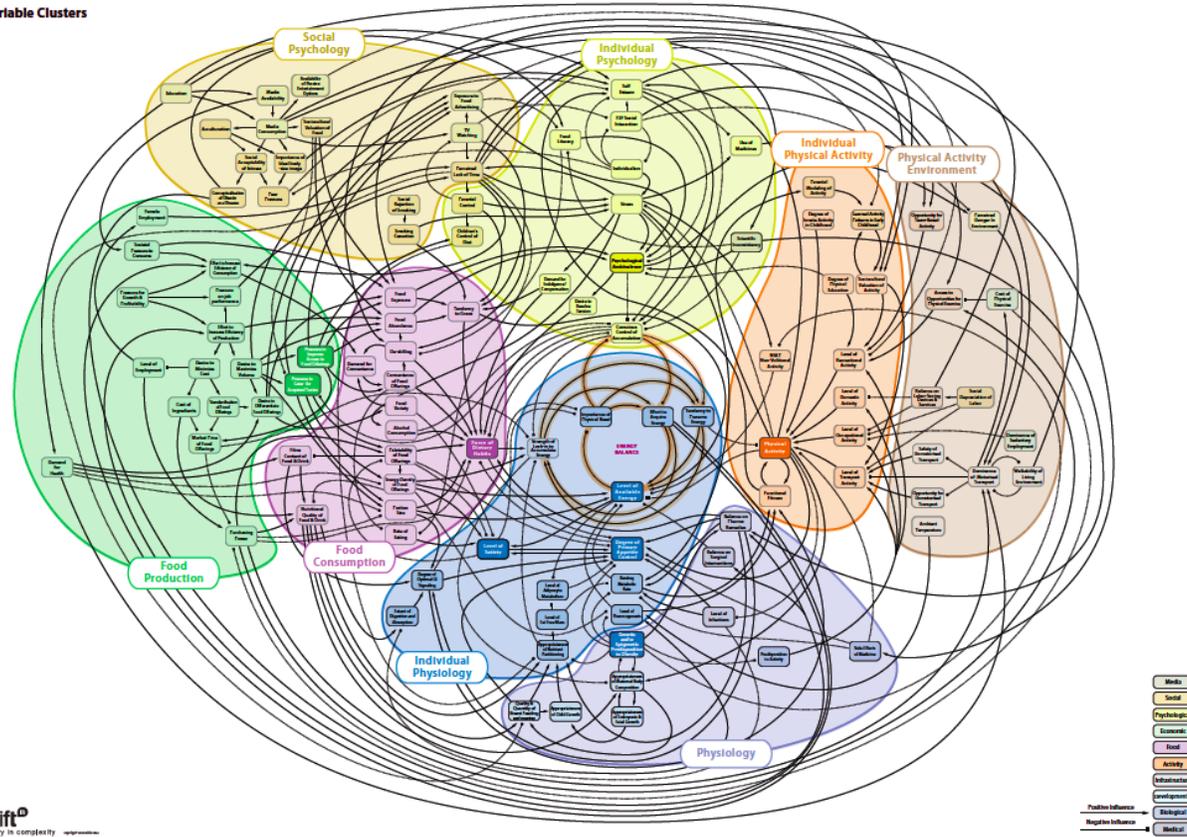


Complex Adaptive Systems, example

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Obesity System Map
Variable Clusters



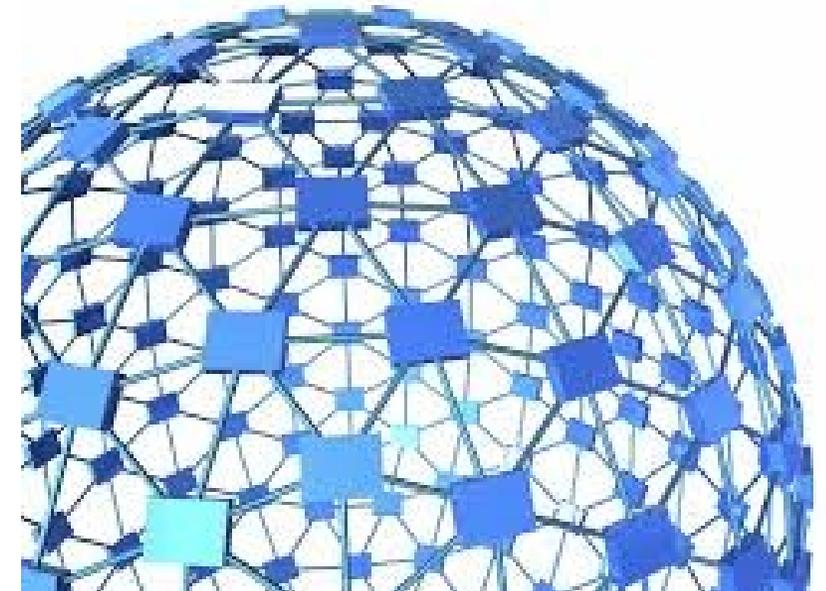
Complex Adaptive Systems

*“Complex Adaptive Systems are systems that have a large numbers of components, often called agents, that interact and adapt or learn.”**

- » **Complex:** dynamic networks of interactions;
- » **Agents:** ‘end-nodes’ which are intelligent and connected;
- » **Adaptive:** the individual and collective behavior of agents mutate and self-organize;

Two trends attract attention:

- » Evolution of M2M to Agents;
- » Agents enable disruptive products and services;



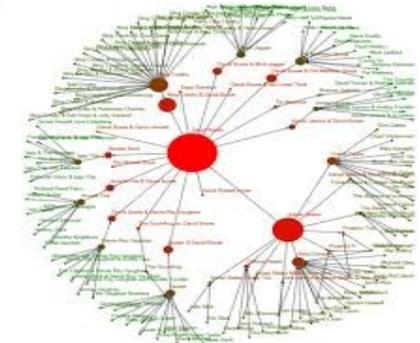
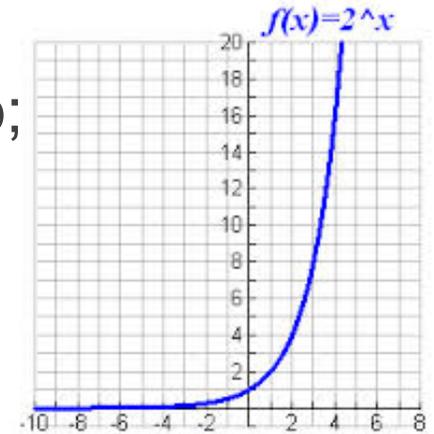
* Definition by John H. Holland

Evolution of M2M to Agents

	M2M	IoT	Agents
Strategic	Non-integrated, single connection focussed, cost reduction	Integrated, multi connection, solution focussed, cost efficient	Multiple integrated, multi connection, smart
Hardware	'Dumm' terminals, expensive, custom made	More intelligent devices, limited processing power, higher volume	Smart devices, unlimited processing power inside, off the shelf components
Connectivity	Mobile- and fixed network, one low tariff, low QoS	Hybrid networks, unique tariffing, Global roaming, differentiation in QoS	Full hybrid networks, almost no tariff, full QoS
Applications	Customised, relatively simple, various platforms,	Cloud, Aggregating lot of data, integration with OSS/BSS	Decentralize communication, adaptive learning, self-execute

From M2M to Agents: a summary

- » Agents are exponential factors;
 - » Agents have their own processing power and are cheap;
 - » Dynamics of interactions will multiply;
 - » Attract much attention and new entries;
 - » Innovative services and products will emerge;
- » Connectivity needs to be redefined;
 - » Agents have multiple connections;
 - » Connections will mainly be to each other;
 - » Home Gateway will be central agent;



Disruptors are everywhere

What have 'Facebook', 'Napster',
'Uber', 'Hue', 'Gorilla Glass',
'Nest', 'Airbnb' in common?



3 differences between a disruptor and an innovator:

- » undisciplined strategy;
- » unconstrained growth;
- » unencumbered development;



Characterization of Disruption

Focus on only one strategy "discipline- or "generic strategy"—low cost, premium product, or customer intimacy,	Strategy	Compete on all strategic dimensions at once, Enter the market better, cheaper and customized; innovate constantly
First target a small group of early adopters and later enter the mainstream market.	Marketing	Market to all customer segments immediately, and be ready to scale up—and exit swiftly
Seek innovation in lower-cost, feature-poor technology & that meet the needs of underserved customer segments	Innovation	Launch low-cost experiments directly into the market. Combine reusable components rather than designing from scratch.
Classic bell curve (innovators, early adapters, early majority, late majority, and laggards	Market adaptation	Trial users who often participate in product development, and everyone else;
Failed experiments: evidence that the emerging technology is not ready	Failed experiments	Failed experiments: each epic failure feeds the customer expectations for the potential of something dramatically better;

Disruption and Strategy

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Strategy

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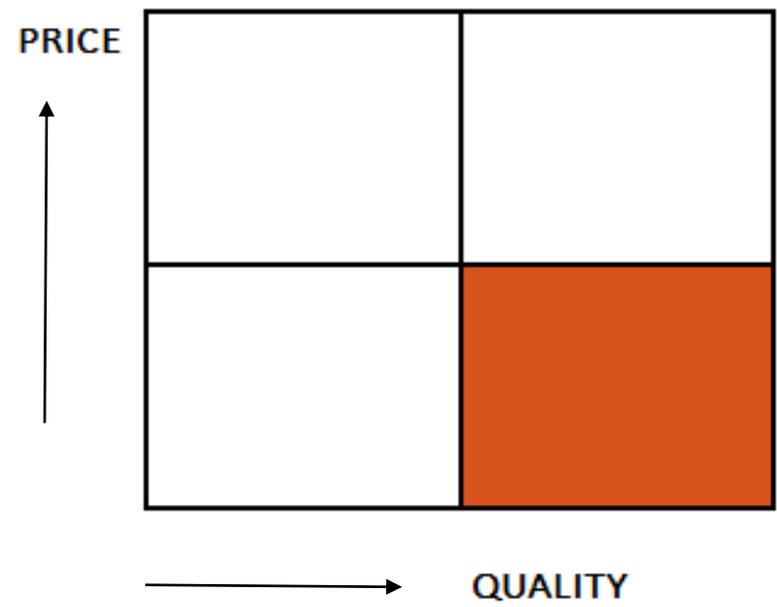
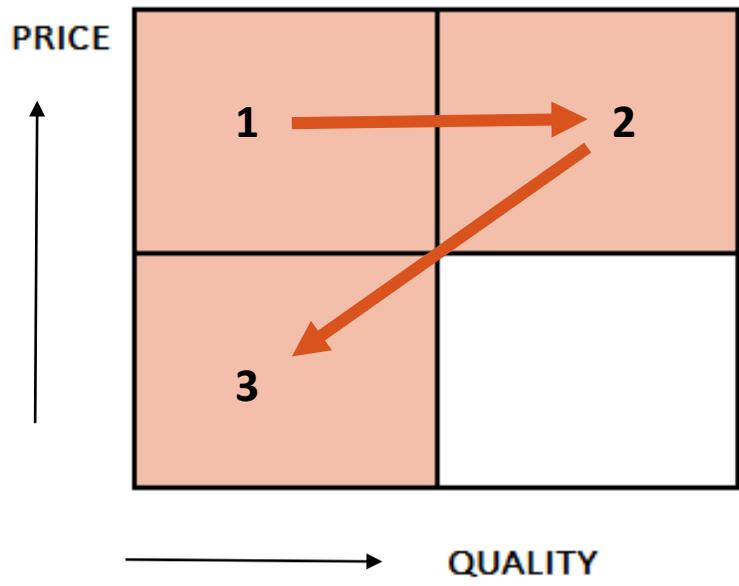


Disruption and Innovation

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Innovation

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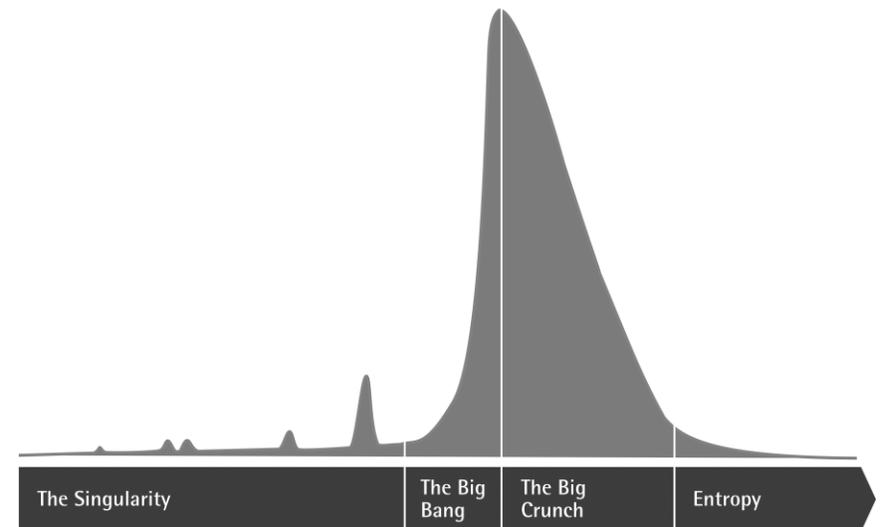
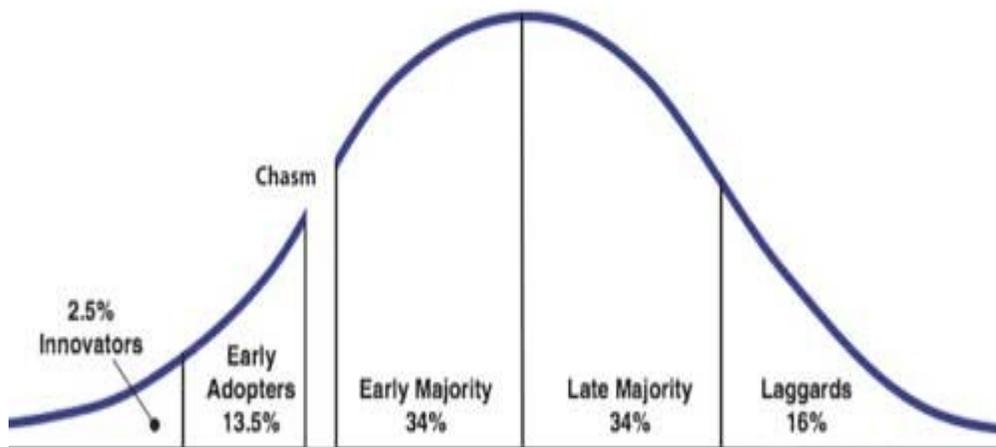
Disruption and Market Adaptation

Classic bell curve (innovators, early adapters, early majority, late majority, and laggards

**Market
adaptation**

Trial users who often participate in product development, and everyone else;

Technology Adoption Life Cycle



Consequences for the business

- » The business isn't the business anymore;
 - » Entry barriers (financial, technical, marketing, learning) are at the lowest point ever;
 - » Most business models are outdated;
 - » Marketplace is fragmented;
- » Value chain will be shaken up and be overcrowded;
- » Chances that 'the Giants' will fail and fall;
- » Your competitor isn't your competitor anymore: watch (out) for newbie's;
- » Great opportunity for innovations, esp. disruptors;
- » Think in terms of 'stack', 'infrastructure', 'platform', 'services', 'enablers';
- » Smaller eco-systems are in favor (more flexible, easy to concentrate, etc.);

450MHz Alliance is supportive and well positioned;

Thanks for your attention

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