

# **Innovation**

Moses M Thiga

# Mercedes Biome



# **Mercedes Biome**

**Grown from seeds in an organic environment from seeds.**

**The car runs on BioNectar4534 stored in the car's Biofibre Body.**

**The BioNectar 4534 combustion process leads to the emission of pure oxygen.**

**At the end of its lifetime it can be turned into compost**

# Mercedes Biome



**A concept car!**


# Google Glass



# Google Glass

**Takes photos and videos, sends text messages, Google Hangouts, makes phone calls, searches Google, and gets turn-by-turn navigation with maps. It can show the weather, the time, and headlines from The New York Times that have been pushed to the device, with spoken headline summaries.**

# Google Glass

A grayscale photograph of a person wearing Google Glass. The person's face is visible, and the glasses are positioned over their eyes. The background is slightly blurred, focusing attention on the person and the device.

**It's a \$1,500 pair of wearable titanium glasses today, 2GB RAM, with a battery-powered 5-megapixel camera and bone-conducting speakerphone bonded to a hovering interactive display.**

**GOOGLE GLASS:**



**BEFORE**

**AFTER**



# Farming in a Sack



# **Invention** vs **Innovation**



The formulation of new ideas for products  
or processes = **Invention**

# **Invention** vs **Innovation**



The successful commercial exploitation of ideas = **Innovation**

# Invention vs Innovation

<b>Characteristic</b>	<b>Inventor</b>	<b>Innovator</b>
Life Goal	Create something new	Create a sustainable business
Preferred Work Mode	Individual	Group oriented
Research	Enjoyable avocation	Necessary evil
Recognition	Personal	Team
Financial Goals	Fund future inventions	Fund future retirement
Core Competency	Discontinuous inventions	Incremental improvements
Preference	Complex problems	Customer problems
Dogmatism	High	Low
Social Skills	Limited	Moderate to extensive

Inventors and Innovators generally have disparate personality characteristics, proclivities and life goals

# Why Innovate?

The goal of innovation is to develop new ideas, to refine them into useful forms, develop solutions and to use these solutions to earn profits, increase efficiency and reduce costs in a business operation, government or society.

# How Innovation happens

**As a flash of genius that occurs to the innovator by chance or accident.**

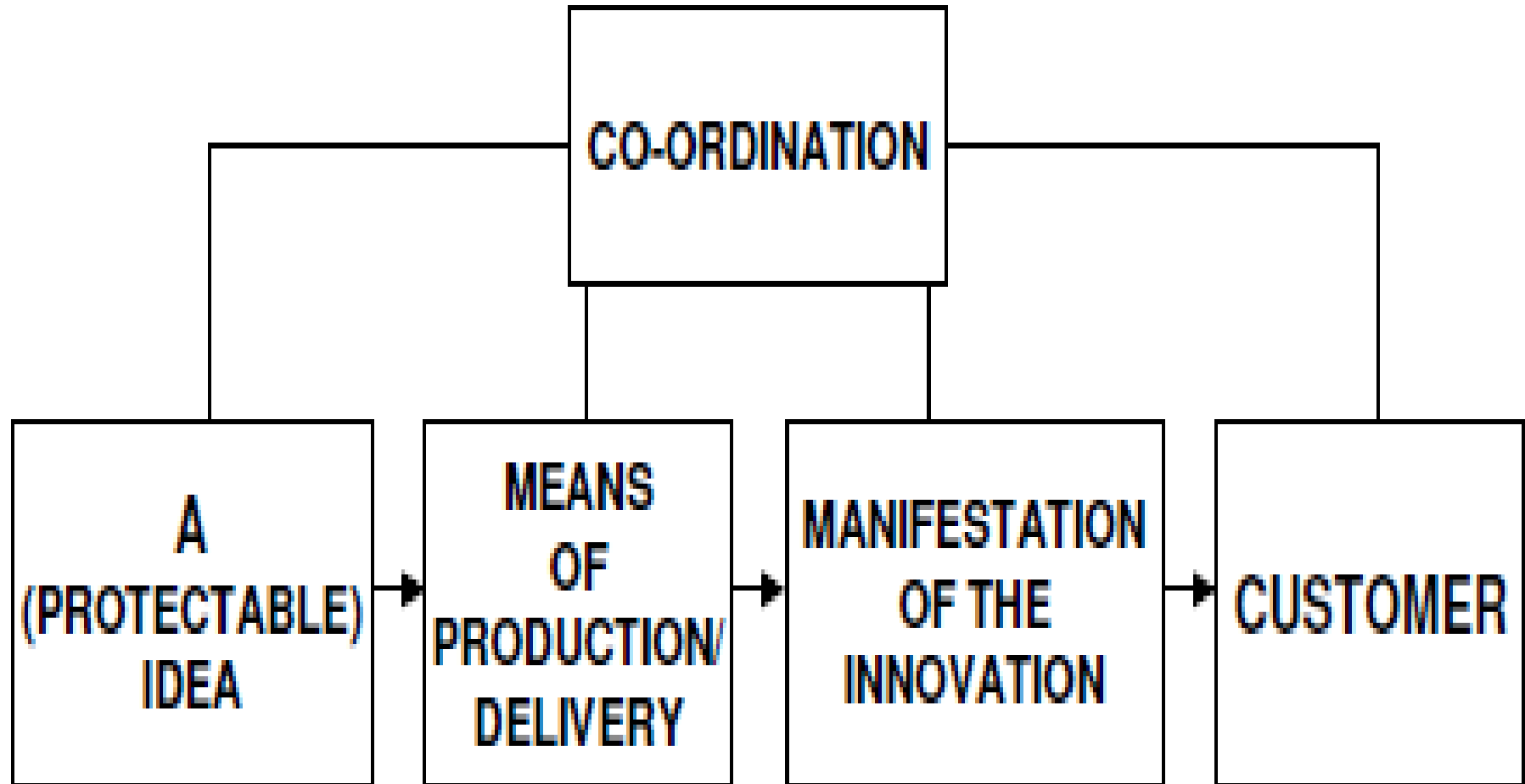
**Empirically, through brainstorming or trial and error.**

**Systematically, where an optimal solution is arrived at by a systematic analysis of the entire solution space**

# Successful Innovation

Successful innovation is about **creating value**. It does so either by **improving existing goods, processes or services** (incremental innovation), or by **developing goods, processes or services of value that have not existed previously** (radical innovation).

# Elements of Successful Innovation





# Successful Innovation leads to Entrepreneurship

**Entrepreneurship** - The process of creating something new and assuming the risks and rewards.

# Successful Innovation leads to Entrepreneurship

**Entrepreneur** – An individual who actively forms or leads their own business and nurtures it to growth and prosperity.

A person who creates and manages change by the recognition of opportunities (needs, wants, opportunities, problems and challenges) and develops people and manages resources to take advantage of the opportunity to create a venture (profitable business).

# What drives Innovation?

The need to adapt to changing environments in business, governance and society

# What drives Innovation?

- Financial pressures to reduce costs, increase efficiency, do more with less, etc
- Increased competition
- Shorter product life cycles
- Value migration
- Stricter regulation
- Industry and community needs for sustainable development
- Increased demand for accountability
- Demographic, social and market changes
- Rising customer expectations regarding service and quality
- Changing economy
- Greater availability of potentially useful technologies coupled with a need to exceed the competition in these technologies

# Innovation in Business

The need to transfer money without using banks ... in Africa / Kenya led to the development of mobile money transfer services ...



# Innovation in Business

The need to counter mobile money transfer services by mobile networks forced banks to innovate ...

## BANK AGENTS IN KENYA



[www.biasharapoint.com](http://www.biasharapoint.com)

# Innovations in Law

**CLEAN | SPLIT<sup>®</sup>**



**Step 1** Open Account

**Step 2** List Property In Dispute

**Step 3** Place Your Bid

**Step 4** Receive Property Division Report

**Yours**

**Mine**

# Innovation in Church

- **Free coffee, free Wi-Fi and plenty of couches.**  
// [Crossroads Church](#), Cincinnati OH
- **Twilight Coffee** – CITAM Nakuru Missions
  - **Street Church** - CITAM Nakuru Youth
  - **Heaven's Gates Hell's Flames** – Reality Ministries International



# Innovation in the Health Sciences



## Digestible Sensors

Swallow a sensor and it transmits your vitals to your mobile phone allowing your doctor to know your condition remotely.

# Innovation In Education



**Innovation is not enough!**

**It must lead to entrepreneurship, profit or gain**

# Innovation is not enough!

- **Competitive advantage:** Your innovation should provide a unique competitive position for the enterprise in the marketplace;
- **Business alignment:** The differentiating factors of your innovation should be conceptualized around the key strategic focus of the enterprise and its goals;
- **Customers:** Knowing the customers who will benefit from your innovation is paramount;
- **Execution:** Identifying resources, processes, risks, partners and suppliers and the ecosystem in the market for succeeding in the innovation is equally important;
- **Business value:** Assessing the value (monetary, market size, etc.) of the innovation and how the idea will bring that value into the organization is a critical underlying factor in selecting which idea to pursue.

# Characteristics of Innovative Persons



**Questioning:** allows innovators to challenge the status quo and consider new possibilities.

# Characteristics of Innovative Persons

**Observing**, which helps innovators detect small behavioral details — in the activities of customers, suppliers, and other companies — that suggest new ways of doing things.



# Characteristics of Innovative Persons



**Networking**, permits innovators to gain radically different perspectives from individuals with diverse backgrounds.

# Characteristics of Innovative Persons

**Experimenting**, which prompts innovators to relentlessly try out new experiences, take things apart, and test new ideas.





# Characteristics of Innovative Persons



**Associational Thinking**, drawing connections between questions, problems, or ideas from unrelated fields, which is triggered by questioning, observing, networking, and experimenting and is the catalyst for creativity.

# Students can be Innovative!

- They can learn to view things in new ways or from a different perspective.
- They can generate new possibilities or new alternatives in solving problems
- They can learn to communicate ideas and values
- They can learn the art of observation
- They can build up their knowledge base

