VALUE PROPOSITIONS

What value do we deliver to the customer?

Which one of our customers' problems are we helping to solve?

What bundles of products and services are we offering to each segment?

Which customer needs are we satisfying?

What is the minimum viable product?

CUSTOMER RELATIONSHIPS

How do we get, keep, and grow customers?

Which customer relationships have we established?

How are they integrated with the rest of our business model?

How costly are they?

CUSTOMER SEGMENTS

For whom are we creating value?

Who are our most important customers?

What are the customer archetypes?

CHANNELS

Through which channels do our customer segments want to be reached?

Smart Lighting
And
Business
Models

We are only
Getting
started

David Edwin
Bluetooth Evangelist

NORDIC SEMICONDUCTOR

Business view of today

- Low cost manufacturers driving costs lower
- Longer life of LEDs, driving down revenue per customer
- Challenges for existing lighting leadership
- Is Smart lighting the savior ?

Smart Lighting

- Iterative and incremental
  - Features
- Change in business models and relationships
  - Ecosystems
    - Join one or make your own

Wireless Smart Lighting

- Doors , Windows, Blinds
- Sensors for light, sound, pressure, presence IR etc.
- Security/Presence
- Air quality
- Beacons
- Asset Tracking
- Ecosystem

Wireless Smart Lighting

- Adding Firmware "the most expensive thing in the universe", weighing nothing but costing a lot to the LED light
  - adlibbed from Norman Augustine, former CEO of Lockheed Martin
- "Most expensive in the universe" compared to what ?

Wireless Smart Lighting Features

- Auto positioning LED lights during installations
  - Automatically get the position of the light in the floor plan
  - Reduce time of installation
  - Increase accuracy of installation
  - Beacons and Position

Wireless Smart Lighting Features

- "There is an app for that" , is not good enough for some markets
  - Apps for light control have too much resistance
  - Apps good for installation, Maintenance, Alerts or trouble shooting (B2B)
  - Examine alternatives and complement

Wireless Smart Lighting Features

- **Passive detection of user using RF signatures**
  - – **Detection of phones/wearables**
  - – **Detection of changes in RF environment to detect specific users**
  - – **Presence detection of users**
    - • **RF, Sound, Pressure and other sensors**
- **Learning Algorithms to supplement and minimize user configuration**

Wireless Smart Lighting Features

- **Removing DALI with RF**
  - **Easier with a feedback loop**
  - **Sensor in the Loop**
- **Reduced costs**
- **Perceived Reliability resistance**
- **Cost and complexity reduction**
- **Approach from non-core DALI markets**
  - **Example : Horticultural**

Wireless Smart Lighting Features

- Presence based Smart Lighting
- Localized by RF/Sound/IR or other sensors
- Reduced running costs
- Better control
- Better analytics

Wireless Smart Lighting Features

- App fatigue in users (less applicable for B2B)
- Few trusted apps on the phone
- Messaging and chat bot behavior in existing messaging apps
- Wechat and Telegram

Do Smart Lighting features suffice ?

- Cloud driven
- Better relationships
- Better Analytics
- Are they good enough ?

Smart Lighting features

- We do not know everything about LED and Solid State Lighting
- American Medical Association
  - Cool it and Dim it – Control it
- Data gathered is important
- User behavior data is valuable
- Control is necessary for the feedback loop
- Smart as Insurance in certain markets
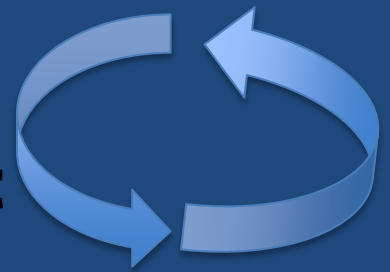
Can we change the business model ?

- Smart Lighting allows for business flexibility
- Charge for the light hardware
- Charge for the lighting Service
- Charge for access to the lighting Network
  - Asset Tracking
- Charge for the .....

Business Model Canvas
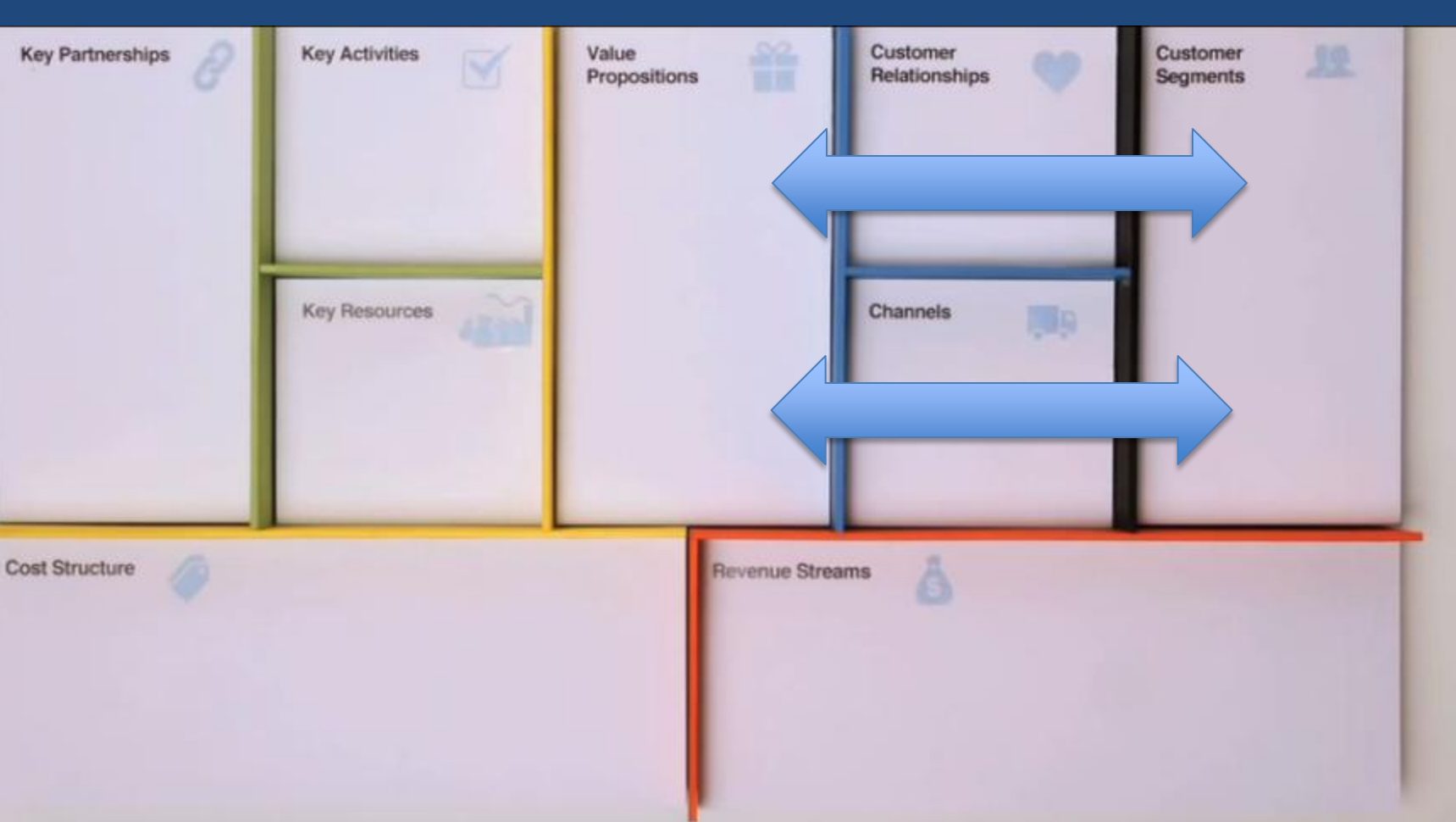
Hypothesis and Truth

- Your new business model is a hypothesis
- Test it to prove its truthfulness and worth
  - Customer Development Process
- Not easy to do within existing brands and existing ways of doing business
- New companies and new brands may be needed

Will business models save us ?

- Existing brands imply trust
- Brand managers typically balk at new business models
- A new place of equals may result where existing brands try to create new brands
- New entrants will try to create new brands

Business Models

- Is Smart is required before you can experiment with Business Models ?
- NO
  - But it helps
- Example : If you made an LED light that actually lasted the 40,000 hrs its rated for
  - Should it be sold as stuff or can only be rented ?
  - Subscriptions may actually be better or is it ?
  - What will work in the market ?

Business Models

- Lighting can be the in-building network
- Network available to 3rd party apps
- Building an Ecosystem
- Allow access to platform
  - Building Security applications
  - Asset and people tracking
  - Tenant apps in buildings (new customizations beyond what is possible today)
  - …… More from 3rd parties

Business Models

- Lighting can be the in-building network
- Computing power available to 3rd party apps
- Allow access to platform
  - Machine learning applications within the lighting system
  - Mist computing

Market View

- New Lancaster Strategy
- Connected & Smart lighting market
  - Small size compared to total market
  - Fragmented
  - Niches on relatively small budgets
  - Pole position is open as Market is new

Tools

Business Model Canvas

Key Partnerships	Key Activities	Value Propositions	Customer Relationships	Customer Segments
	Key Resources		Channels	

Cost Structure	Revenue Streams

Learn to validate your business model hypothesis
Meet your prospects , lots of them
Use the Customer Development Process
Remember sometime prospects may just ask for a faster horse when offered a car

https://devzone.nordicsemi.com

Carpe diem