



Next Generation Shopping Experience

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*“We shop,
therefore we
are”*

1960s & 70s - “Big Discount Boxes”

Strategy

Price, Assortments, Access, Experience



Execution

Operations, Supply Chains, EDI, Inventory Management, Store replication



Financials

Net margins ~4%, Gross margins ~25%, YoY ~5% - 9%



1980s - “Category Killers”

Strategy

Specialized, End-to-End solutions, Market Presence



Execution

Services, Integrations, Operations



Financials

Net margins ~6%, Gross margins ~30%, YoY ~5% to 9%



...and then there were

Club stores



Loyalty and rewards programs

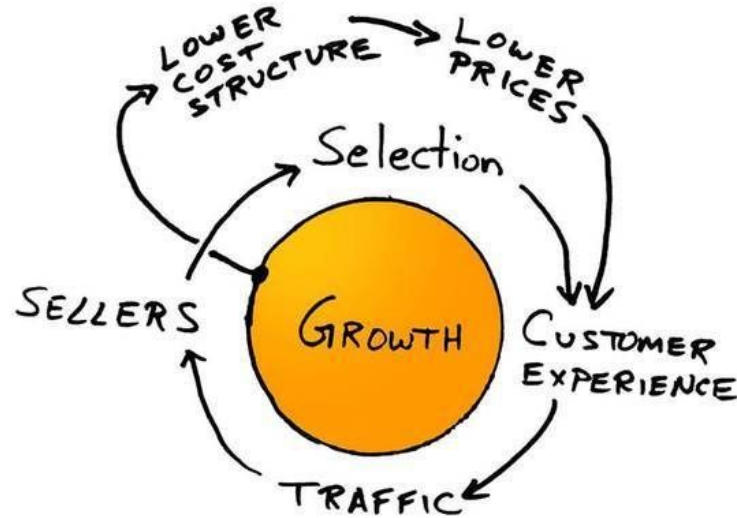
Rudimentary marketing CRM systems are born



High end stores, Super specialized goods stores ...

Savings Made Simple

1990s - e-tail “Movie Screen”



1990s - e-tail Characteristics

Strategy



Technology as competitive advantage, Customer obsession, Scientific pricing, ~Infinite selection, Low entry barrier for suppliers

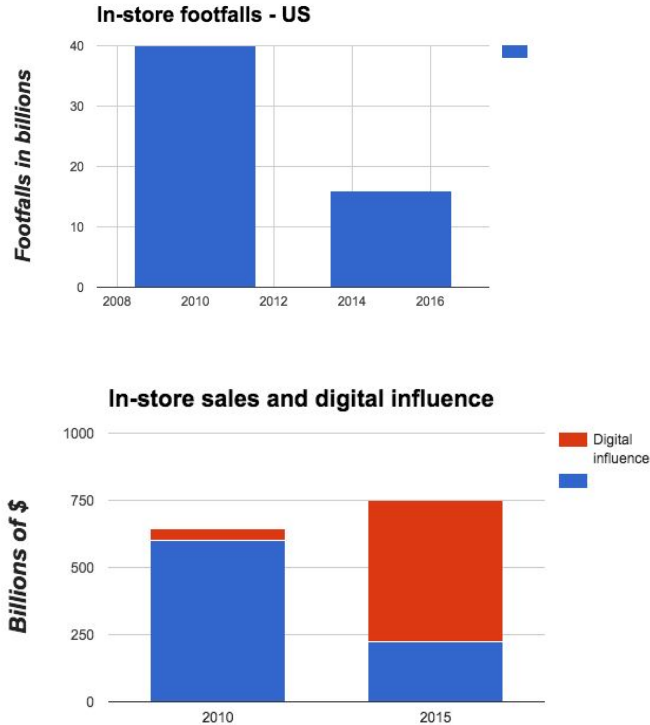
Execution

Andon cords, Kaizen, Data driven decision making in most areas, Digital Ads, Recommendations, Reviews

Financials

Negative net working capital, Long term view for financial returns

2000s & beyond - traditional retail struggles



Store closures & Job losses

Less # of stores translates to lower customer & seller interest

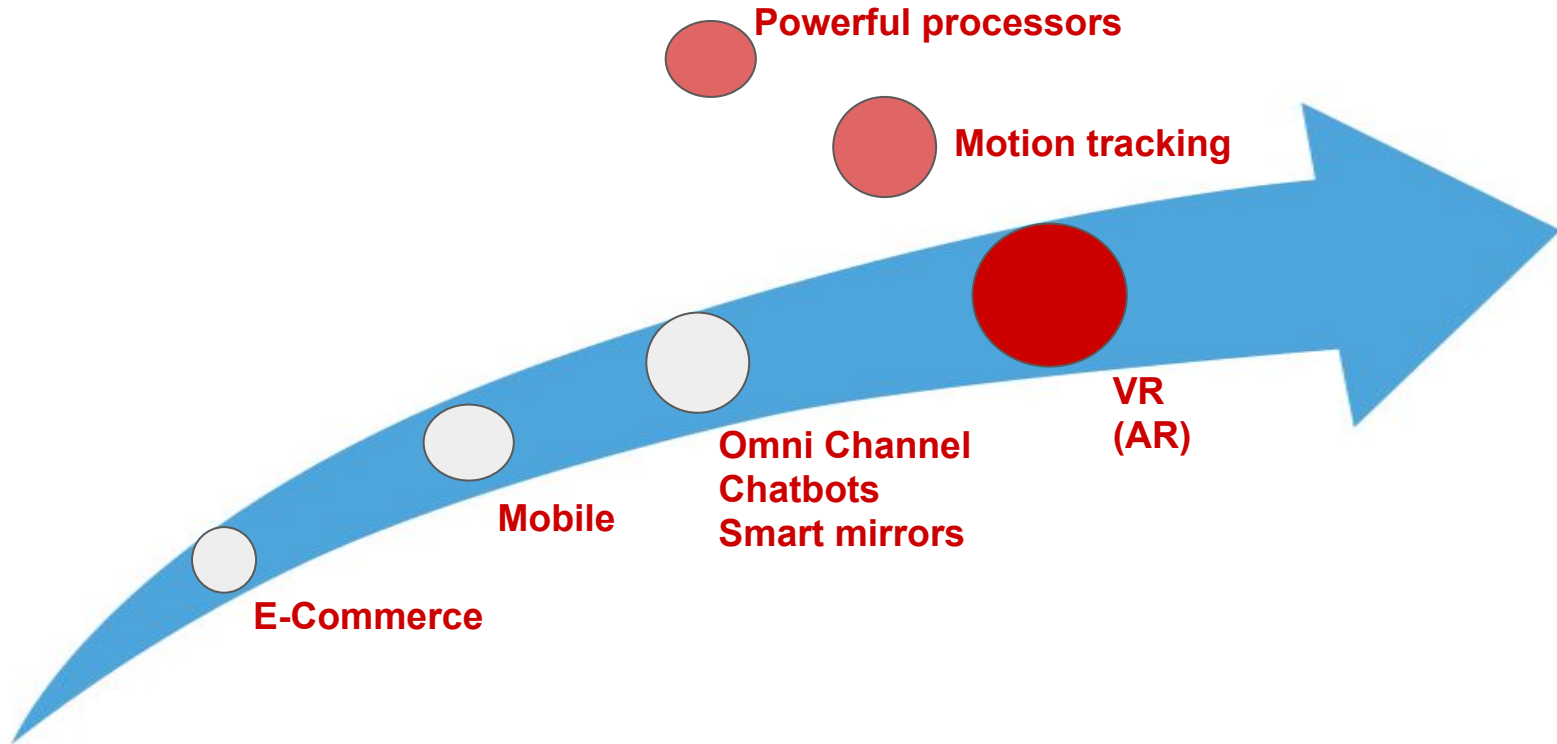
Online strategies haven't taken off - absence of technology firepower, very different operational strategies needed for online sales fulfilment

Summary: Current state

Attribute	Traditional retail	e-tail
Selection	<u>Limited</u>	Virtually unlimited
Personalization	Very low	Highly personalized
Look 'n feel	Mostly great	Non existent
Convenience	Works well for limited use cases	Choosing, Buying & Returning are easy
Pricing & Promotions	Suboptimal	Global optimality
Returns	~10%	~30%
Cart abandonment	Mild concern	Strong concern

Selling Experience

Technology evolutions and trends



Why VR for Retail/Shopping

Recreate In-Store Experience



Why VR for Retail/Shopping

Recreate In-Store Experience

Physical look, feel & connect

Personalized Experience



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Anywhere & Anytime

Trials & Selection



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Assistance

Share & Interact

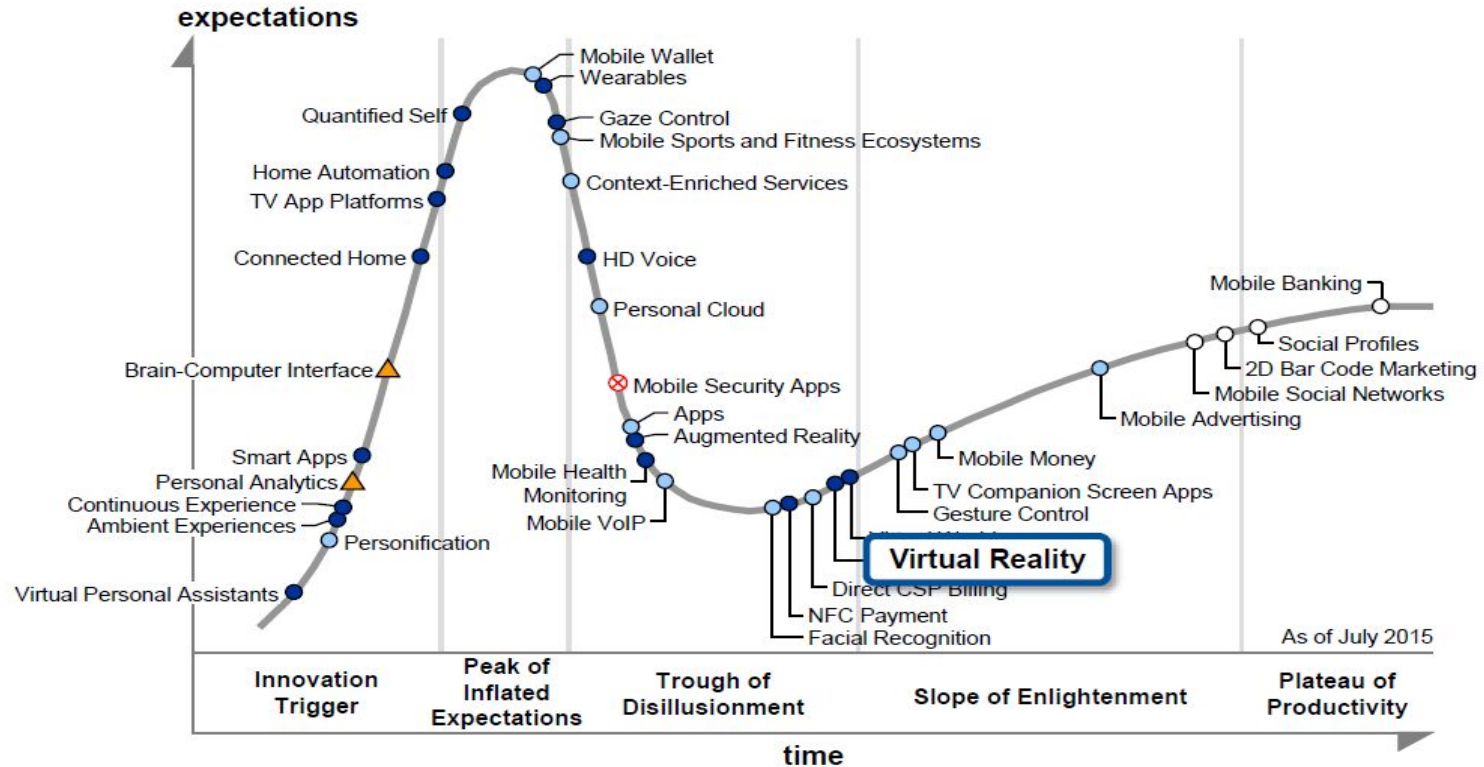
Cross-sells and Upsell

Seeing is believing



Interactivity
Immersion
Conversion

The market is ready for VR



Technology players

Augmented Reality

Microsoft HoloLens



RideOn Ski Goggles



Google Glass



Google Cardboard



HTC Vive



Samsung Gear VR



PlayStation VR



Oculus Rift



Virtual Reality

Technology details

Content

360 / High end Photo realistic Camera
Photogrammetry

Headsets

Smartphones
Tethered to a PC
Built In PC in headset

Software

Basic VR, simple videos
Custom VR App for Oculus, Vive, HoloLens

Retail

Virtual fitting rooms
Virtual mirrors, Body scanners

Challenges

Cost

Headsets
Content Production

Adoption

No dominant player or platform
No standard format for content

Side effects

Nausea
Cybersickness



Regulatory and societal impact



VR Experiences **not rated** like games and movies

Copyrightability



Sell the experience, **forget the product**

No privacy in virtual worlds

Virtual-reality experiences can have **real** physical and emotional consequences

Isolation from the real world

VR/AR EcoSystem

Technology Players behind that “Experience”

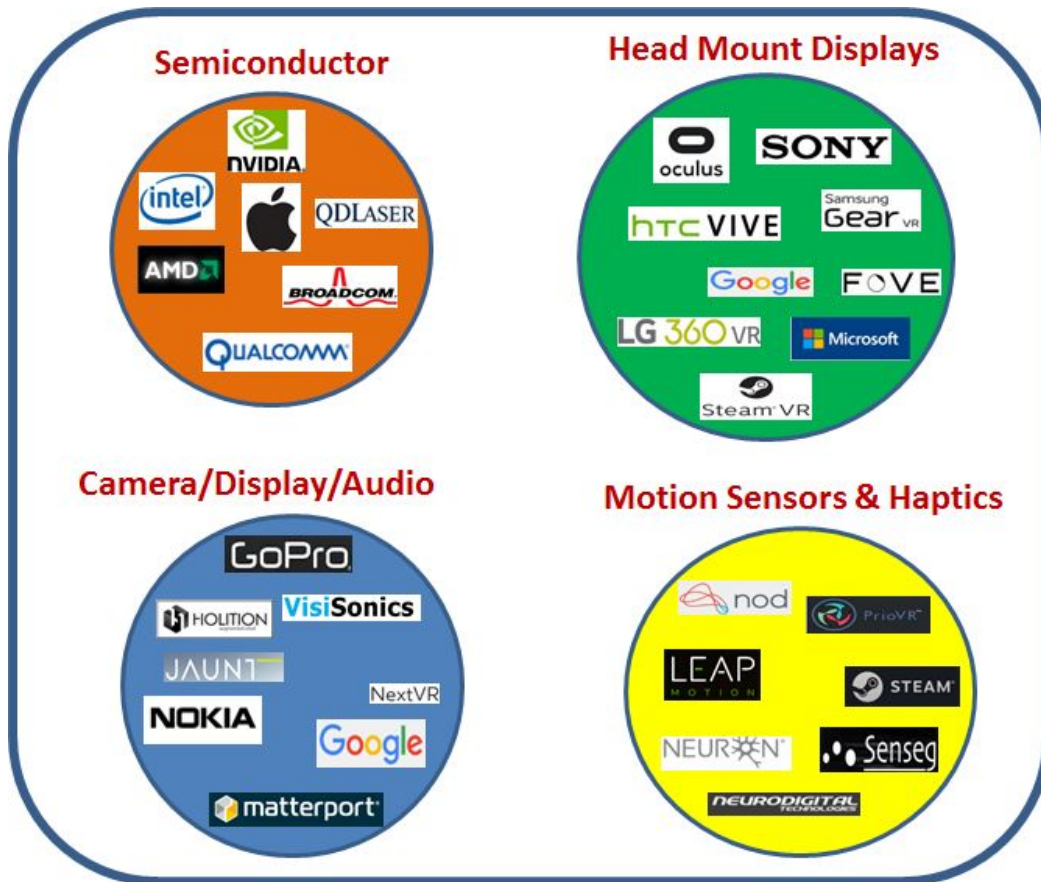
Hardware

Software/Platform

Content Providers

Retail

VR/AR EcoSystem : Hardware



Winning Factors:

- Cost
- Ease of Use
- Compute
- Integration

VR/AR EcoSystem : Platform

SOFTWARE



CONTENT



Winning Factors:

- Inter-Operability
- Content Quality
- User Interface (UI)

VR/AR EcoSystem : Retail



- **Advantage**
 - Amazon
 - Alibaba

- **Opportunity**
 - Sony
 - Facebook

- **Challenges**
 - Cost
 - Ease of Use
 - Inter-Operability

VR/AR in Retail: Potential Winners

Winners	Advantage	Challenges
Amazon & Alibaba	Platform Play; e-commerce leadership Early Adoption; Consumer Base	Execution; Cost;
Sony	Leadership in VR Gaming; Established Playstation audience.	Entry into Retail; Cost;
ebay	Early Adoption; Successful Field Trials; Hands Free Operation	Inter-operability;
Thomas Cook	Early Adoption; High Margin	
Automotive	High Margin	
Real Estate	High Margin	



ebay & MYER : World's First VR Departmental Store



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