



# The Progression of Biometrics in a Turbulent World Economy

How and When will the Biometrics Market Take Off?

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  - Segmentation Models
  - Opportunity Sizing
  - Technology Evolution
  - Competitive Environment
  - Target Profiling
  - Niche Penetration Strategy
  - Solution Effectiveness
  - Positioning
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# Biometrics Market Progression



Economic Indicators & Market Drivers



Framework for Analysis

- Technology Adoption Lifecycle
- The Chasm Crisis



Strategy for Success

- Vertical Niche Marketing
- Economies of Knowledge©



Market Opportunity

- Identify
- Prioritize
- Size



Implications for Stakeholders

# ↕↑ Turbulent World Economy

## ☞ Driven by Acceleration & Dated Models

- Inflation, Interest Rates, Oil Prices, Middle East Conflict
- Globalization & Instantaneous Communications
- Industry Consolidation & Fragmentation

## ☞ Economic Indicators

- US, Japan & Europe Drag Down - China, India, Russia Drive UP
- World Economy 1-2% growth - Lowest in a Decade
- US = 1/3 World GDP - Lowest interest rate 1.75%
- Japan GOLD RUSH – Unemployment up, Confidence down
- Europe – Stagnation, Relief ?, Euro interest rate 3.25%

## ↕↑ Biometrics Market Drivers

- ☞ Post 911 *Frenzy*
- ☞ War on Terrorism Drives US GOVT \$B Deficit Spending,
- ☞ Consumer Confidence & Business Expectations Down
- ☞ Focus on Travel & Transportation Security
- ☞ Historical Performance - *"Promises, Promises"*
- ☞ Technology Evolution – Price/Performance, Standards
- ☞ Proven Applications

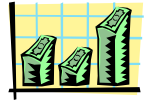
So, when will the Biometrics Market  
**REALLY** take-off 

# Framework for Analysis

 Technology Adoption Lifecycle

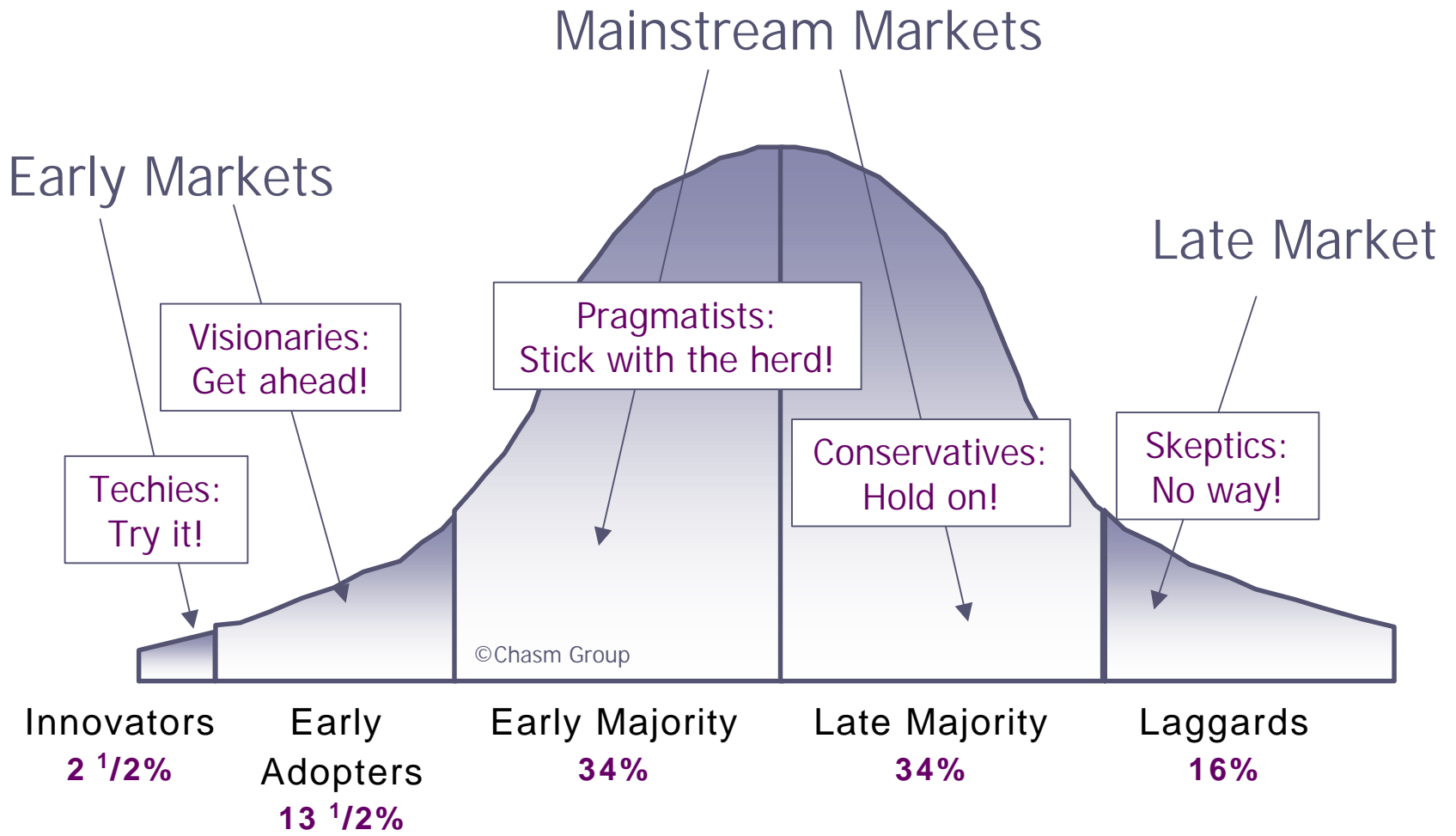
 Market Development Model

 *Chasm Crisis*



# Technology Adoption Life Cycle

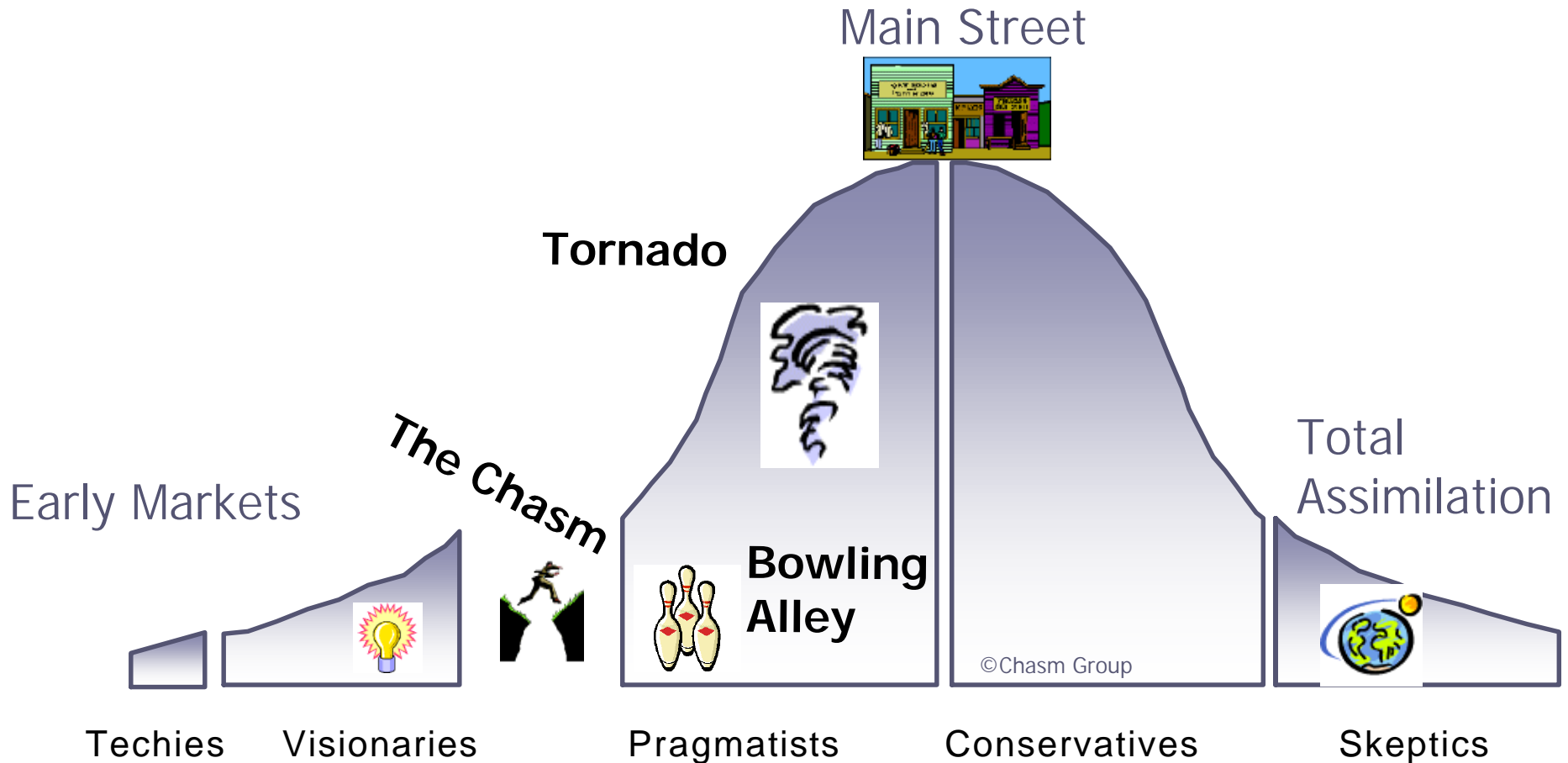
Groups are distinguished from each other based on their characteristic response to discontinuous innovations created by new technology





# Market Development Model

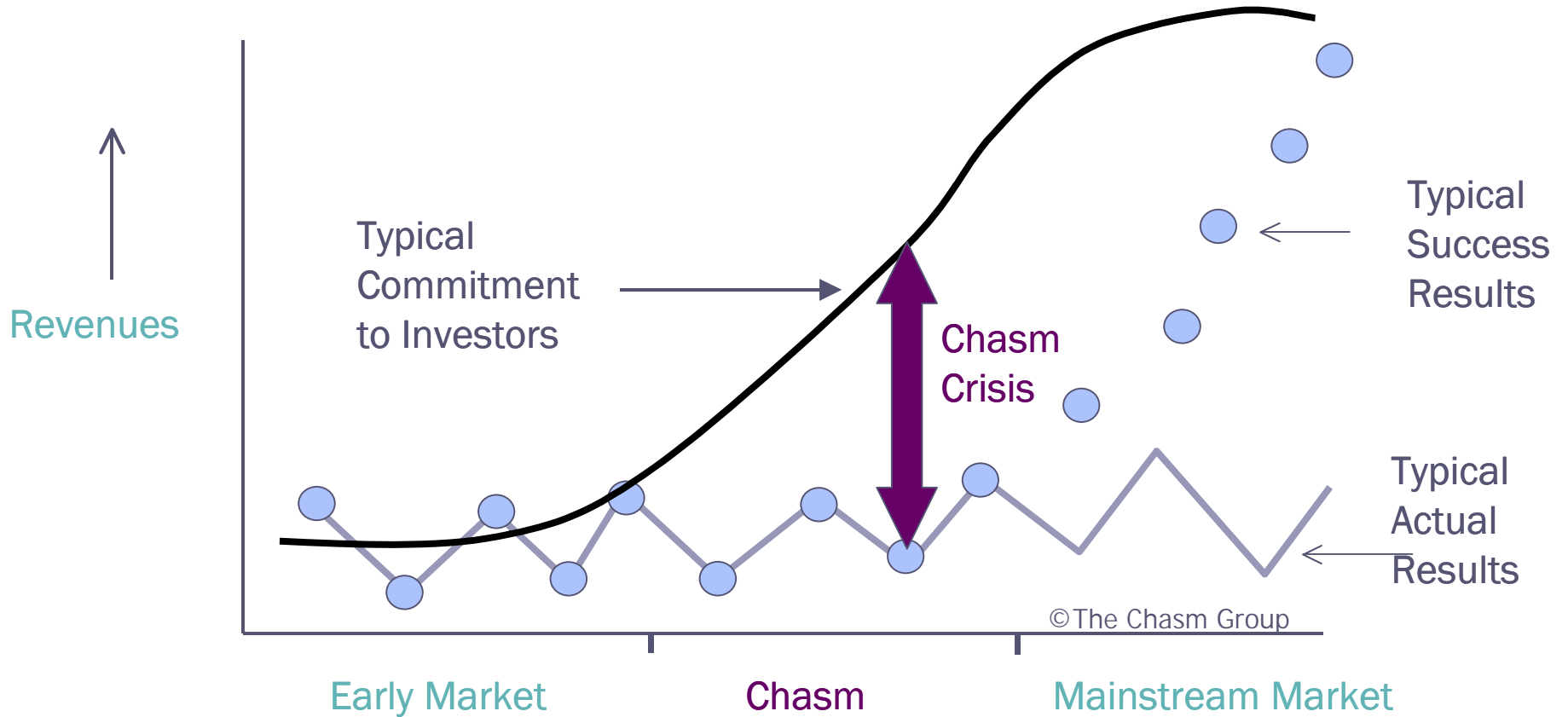
*Transitions are Not Smooth*







# Chasm Crisis





# Strategy for Success



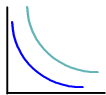
Market Definition



Niche Market Penetration



*Bowling Alley* Strategy



Economies of Knowledge©



# Market Definition

Marketing: Taking actions to create, grow, maintain or defend markets.



## Market:

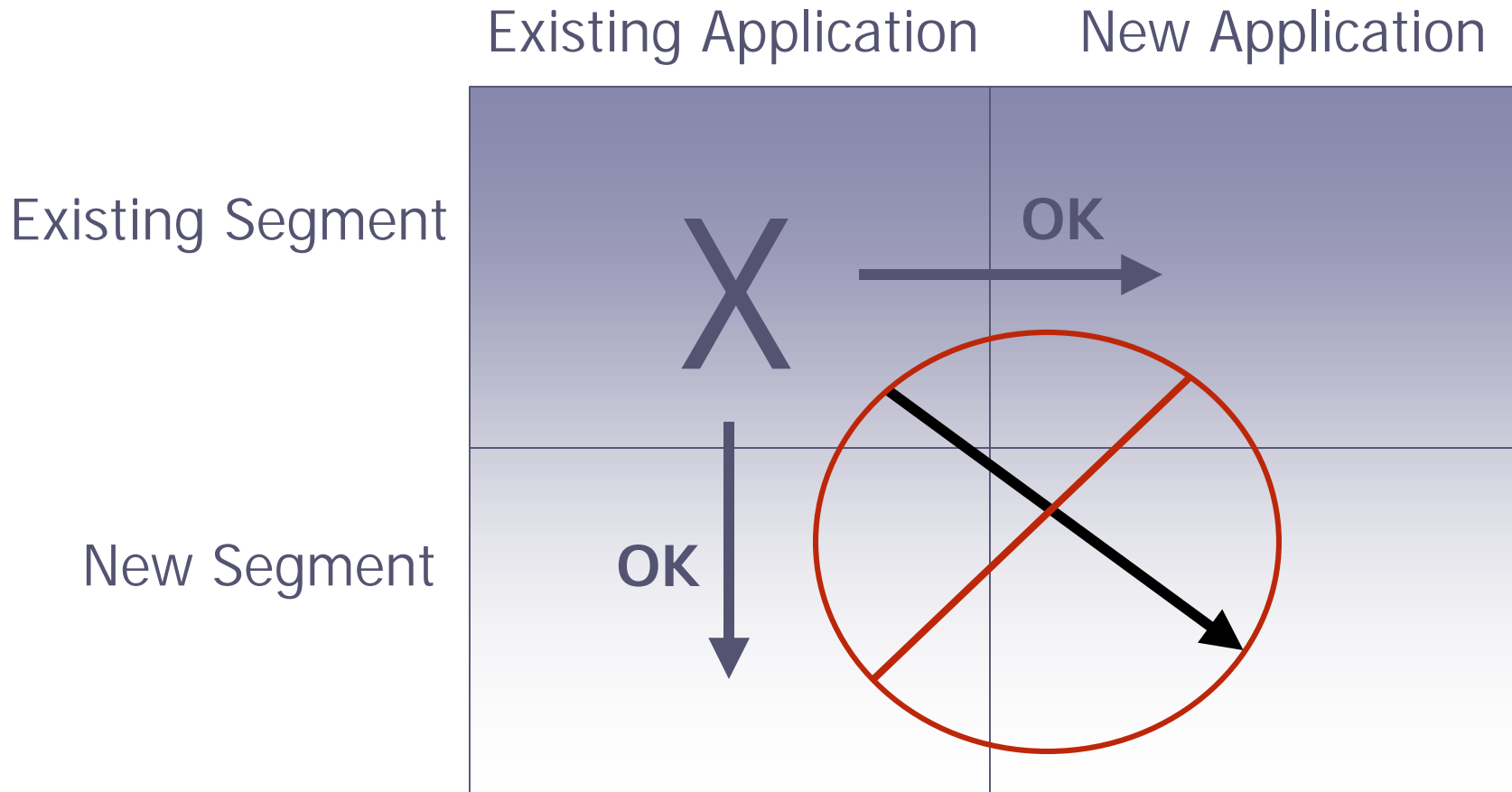
- a set of actual or potential customers
- for a given set of products or services
- who have a common set of needs or wants, and
- who reference each other when making buying decisions

## 1) Market Self Select

2) Two individuals/organizations buying the same product for the same reason that have no way to reference each other are not part of the same market.

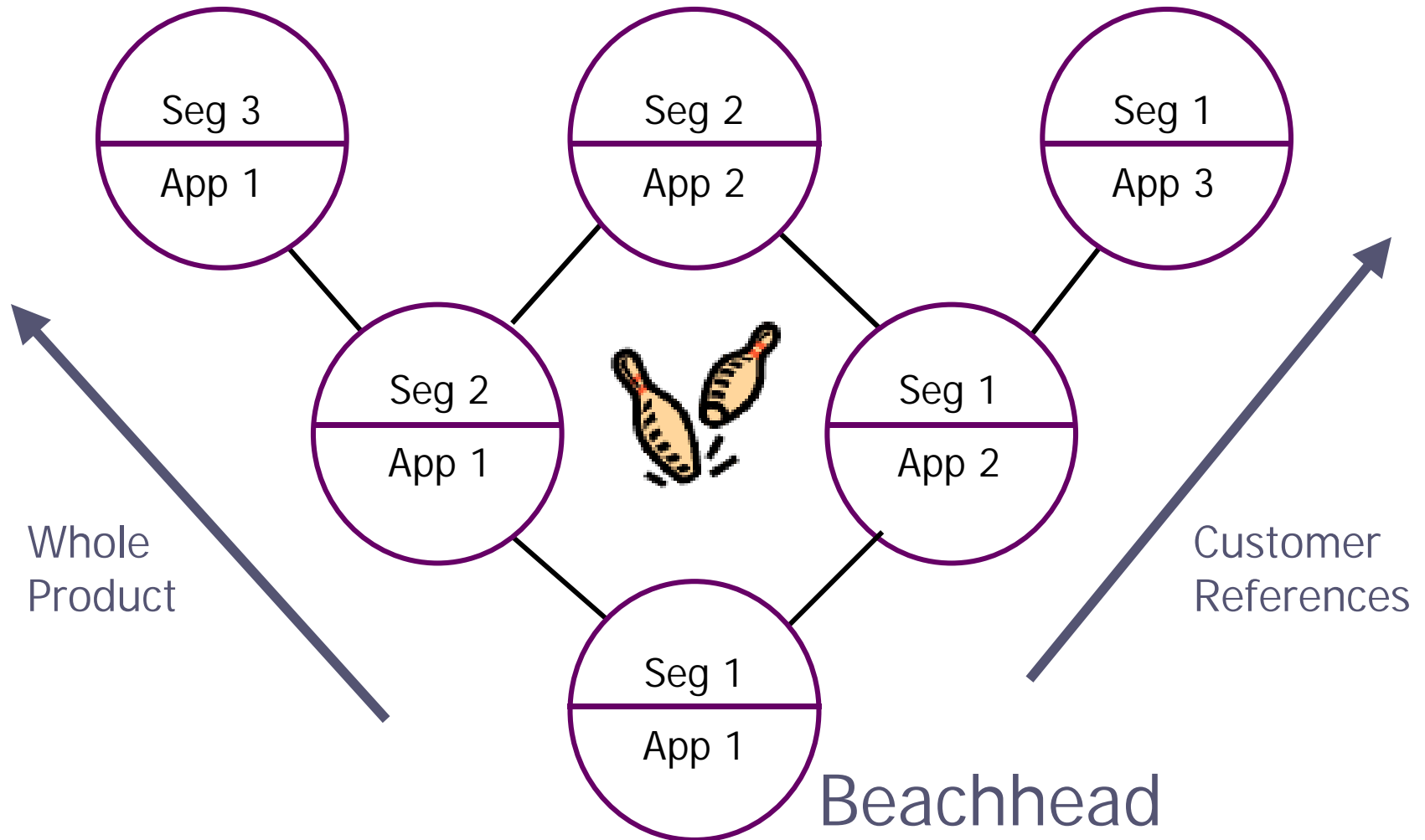


# Niche Market Penetration





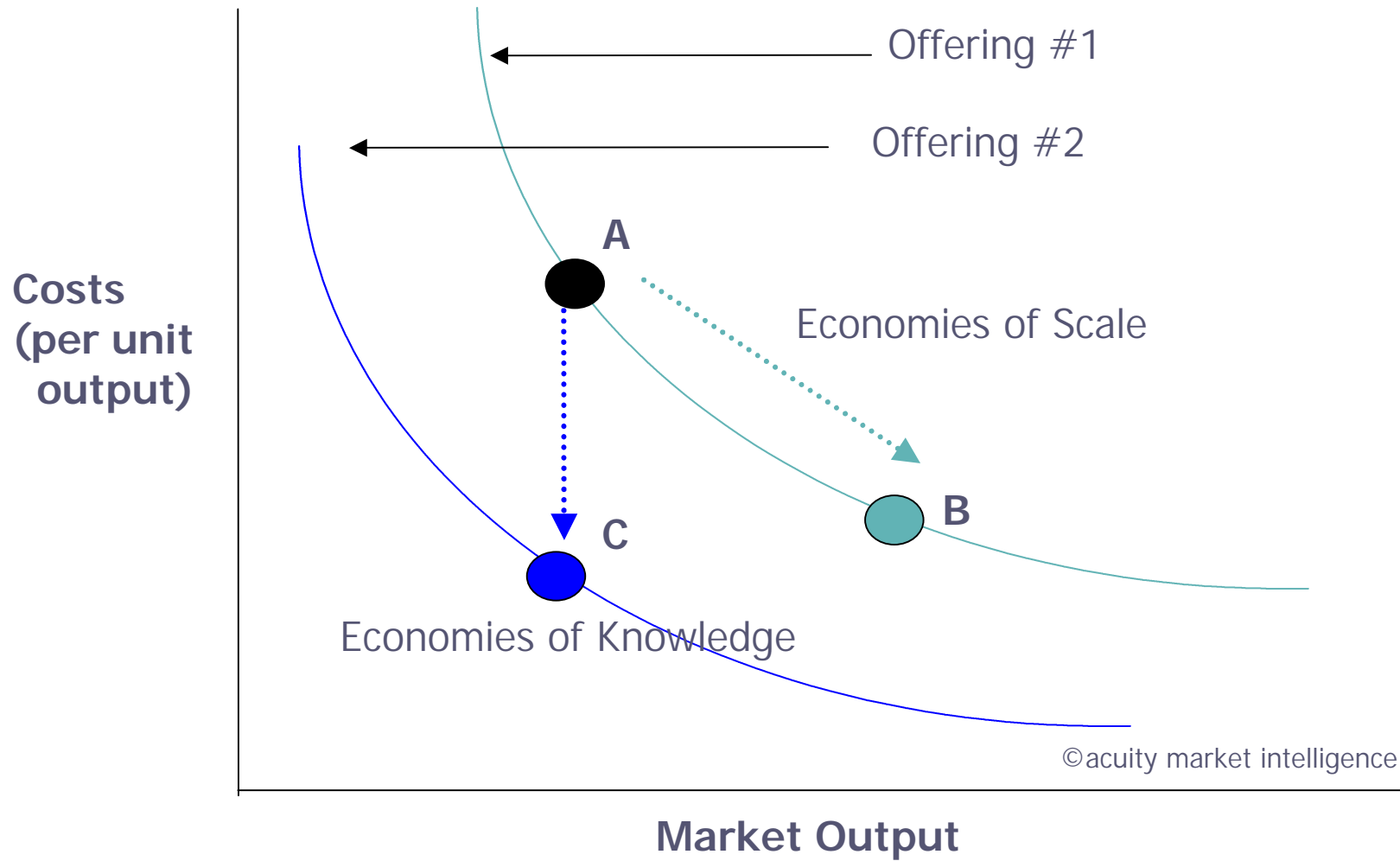
# Bowling Alley Strategy



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# Economies of Knowledge<sup>©</sup>





# Market Opportunity

Vertical Industry Approach: Identify Problems that are Unique, Difficult, Significant then *Divide and Conquer* - Segment, Target, Dominate



## Market Segmentation

- Identify
- Granulate



## Opportunities

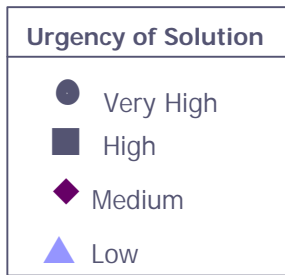
- Prioritize
- Rank



## Size

- Define The Universe
- Top Down

# Identify: Biometrics Industry Segmentation Matrix

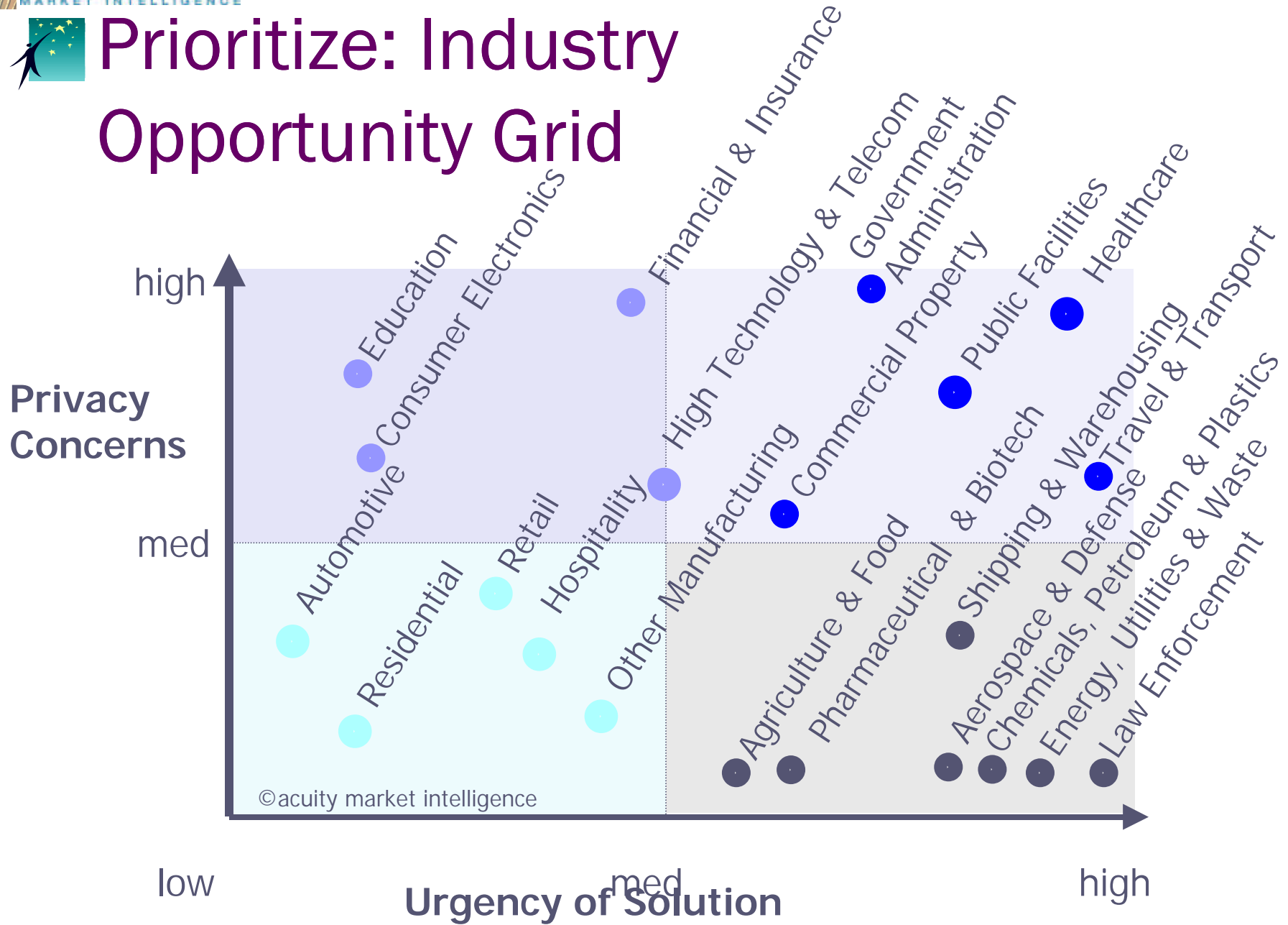


	Government Administration	Law Enforcement	Aerospace & Defense	Financial & Insurance	Healthcare	Hospitality	Public Facilities	Travel & Transportation	Shipping & Warehousing	Energy, Utilities & Waste	Chemicals, Petroleum & Plastics	Pharmaceutical & Biotech	Agriculture & Food	Education	High Technology & Telecom	Other Manufacturing	Commercial Property	Retail	Automotive	Consumer Electronics	Residential
<b>Physical Access</b>	●	●	●	●	■	■	●	●	●	●	●	●	■	■	■	■	◆	▲	▲	▲	▲
<b>Logical Access</b>																					
Secure Data personal, corporate, public	●	●	●	●	●	■	■	●	●	●	●	●	■	●	■	■	◆	◆	◆	◆	◆
Financial Transactions POS, ATM, e-commerce, gov't disbursements	■	◆	◆	■	●	◆	◆	■	■	■	●	■	■	◆	◆	■	●	■	▲	■	◆
<b>Identity Confirmation</b>																					
Voter, Benefits, DMV, Drivers License background check	●	●	●	■	■	■	■	●	■	■	■	■	■	◆	◆	◆	■	▲	▲	▲	-
<b>Time &amp; Attendance</b>																					
	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	▲	◆	◆	▲	◆	▲	▲	-
<b>Surveillance</b>																					
public & private	●	●	■	■	■	◆	●	●	■	●	●	●	■	◆	◆	■	■	▲	▲	▲	▲

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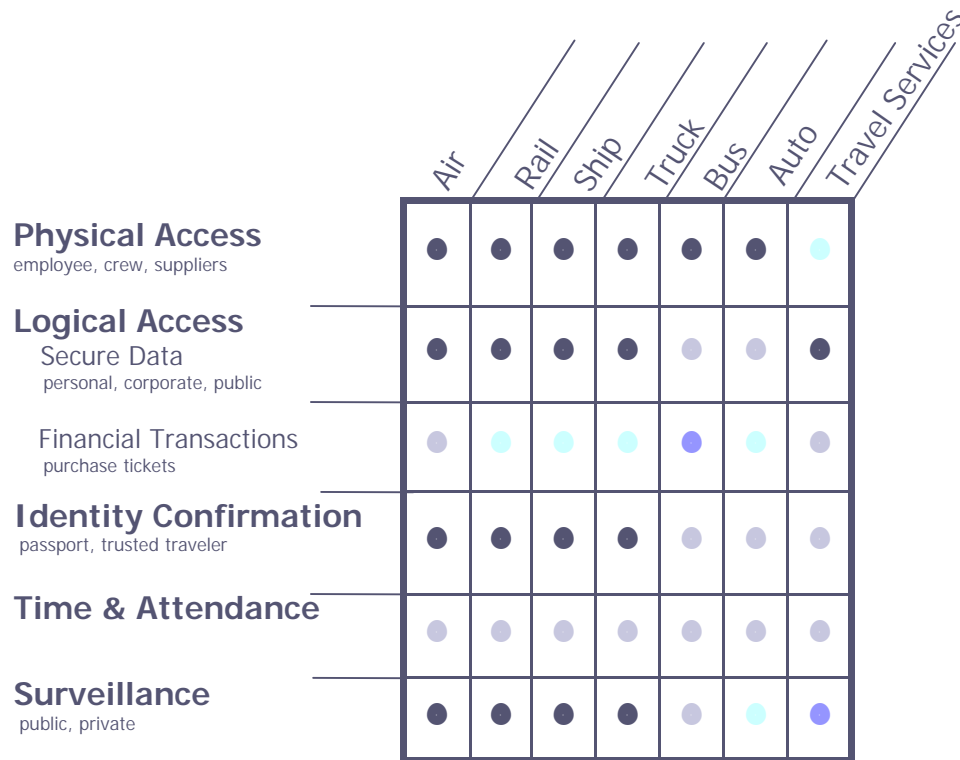
# Prioritize: Industry Opportunity Grid



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# Granulate: Travel & Transportation Segments

Urgency of Solution	
●	Very High
●	High
●	Medium
●	Low



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# Granulate: Air Travel & Transportation Segments

Urgency of Solution	
●	Very High
●	High
●	Medium
●	Low

	Airport Perimeter	Airport Public Access	Airport Private Access	Airplanes	Passengers	Airport Employees	Crew	Outside Suppliers	Baggage	Cargo & Mail	Airline Employees	Travel Services
<b>Physical Access</b> employee, crew, suppliers	●	●	●		●	●	●	●	●	●	●	-
<b>Logical Access</b> Secure Data personal, corporate, public	-	-	-	●	●	●	●	-	-	●	●	
Financial Transactions reservations, ticketing	-	-	-	●	-	-	●	-	●	●	●	●
<b>Identity Confirmation</b> passport, trusted traveler	-	-	-	●	●	●	●	-	-	●	●	
<b>Time &amp; Attendance</b>	-	-	-	-	●	-	-	-	-	●	●	●
<b>Surveillance</b> public, private	●	●	●	●	●	●	●	●	●	●	●	●

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# Size: Target Segment Sizing

## *Airport Secure Access Example U.S. DOT Data*

Airport Type	Number of Airports	Estimated Ave. # Secured Access	Total # of Secured Access Points	Gross Biometric Revenue @ \$1500 per Secured Access
Large hub	31	1000	31,000	\$46,500,000
Medium Hub	35	500	17,500	\$26,250,000
Small Hub	71	100	7,100	\$10,650,000
Non Hub	282	50	14,100	\$21,150,000
<b>TOTAL</b>	<b>419</b>		<b>69,700</b>	<b>\$104,550,000</b>

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# Implications for Stakeholders

So, When Will The Market Take-off 

- Chasm Crossing Complete
- Technology Proven in Wide Range of Applications
- Mainstream Adoption Across Multiple Industries
- Privacy & Security Issues Resolved
- Ready for Mass Consumer Market

# Implications for Stakeholders

-  Biometrics Vendors

-  Solution Providers

  - Integrators, OEMs, VARs, etc.

-  Investors

-  End-Users



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