



Mobility, Digital Identity, and The Future of Secure Credentials

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Document Security Alliance
Member Meeting
October 1, 2015

About Acuity Market Intelligence

The *Definitive Source* for Biometrics Market Intelligence

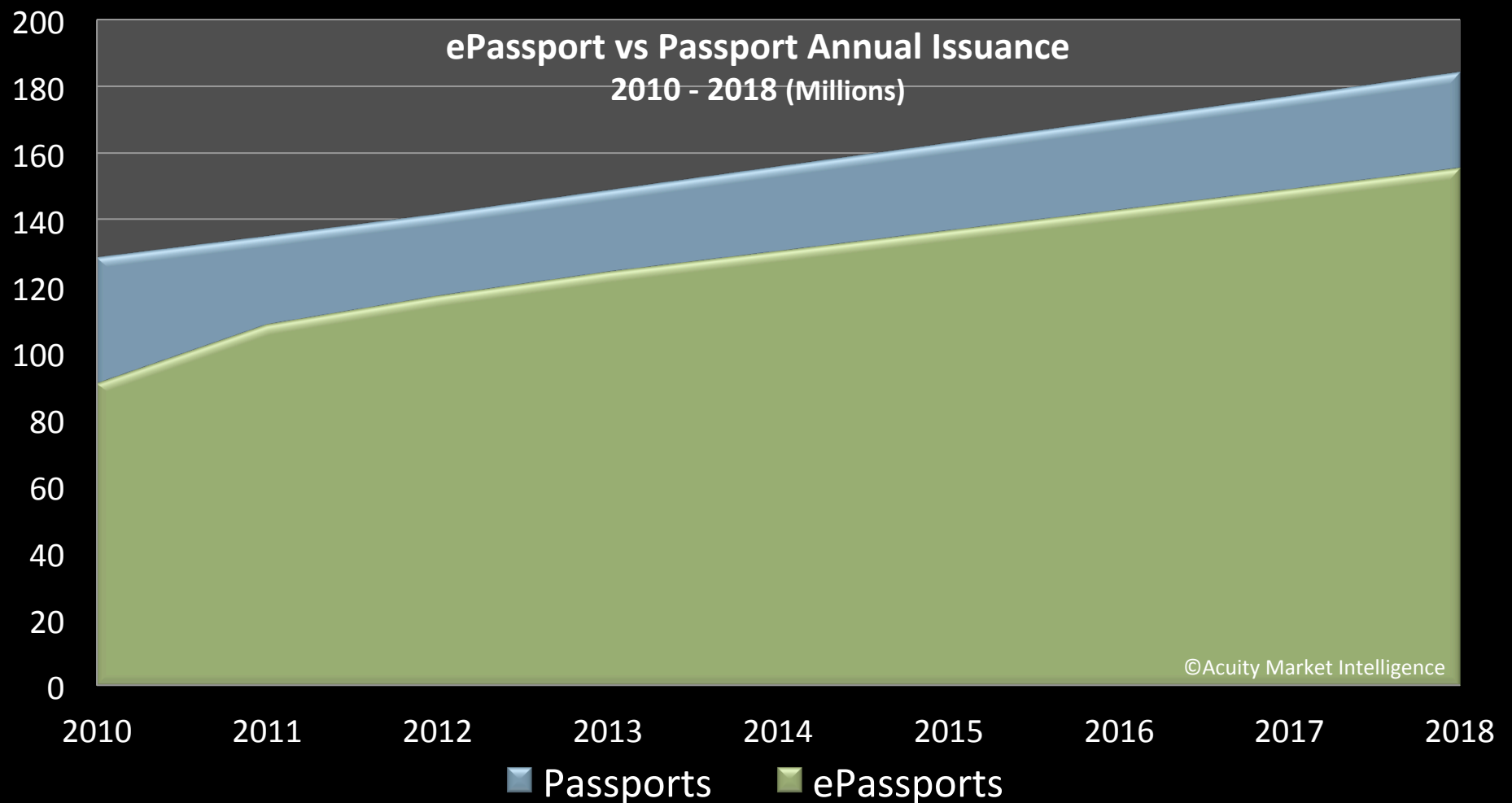
- Strategic Research Consultancy Founded in 2001
- Identity Focus: Mobile Biometrics, Automated Border Control, Secure Documents
- Consistently delivers *thought-provoking, data-driven* insight and analysis
- Proven record of accurately forecasting market trends
- Research Reports on Automated Border Control, National IDs, EPassports
- **NEW REPORT: *The Global Biometrics and Mobility Report***



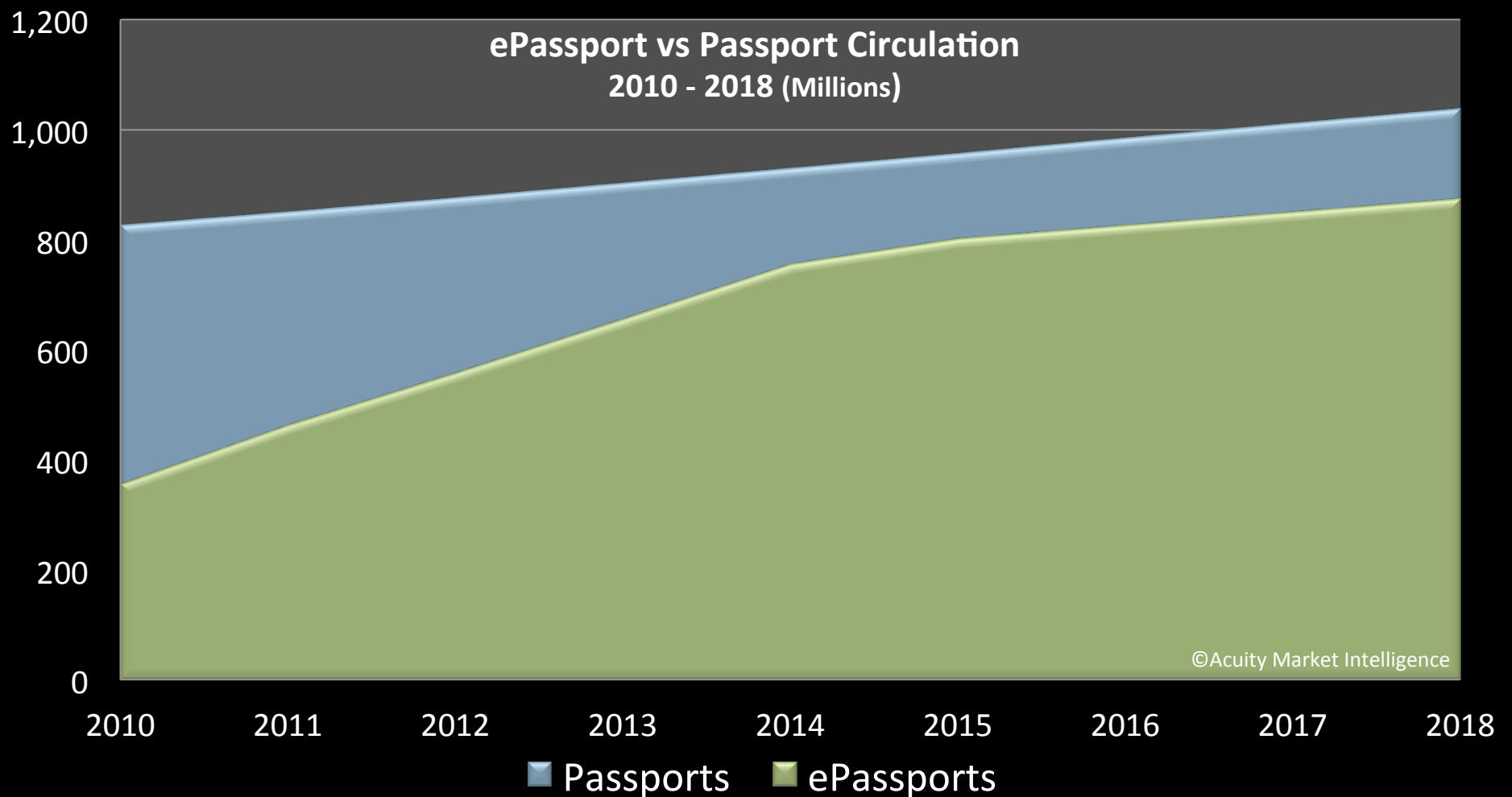
Today's Discussion: Market Disruption

- Mobility, Digital Identity, and The Future of Secure Credentials
 - Market Growth
 - EPassports, National eIDs, Mobile Biometric Devices & Apps
 - Converging Market Forces
 - Foundation of Market Disruption
 - Evolution of Digital Identity ➡ Identity 3.0
 - Rise of “Consumer Centricity”
 - “Emergent Identify”
 - Identity Market Disruption
 - Identity Credentials
 - Mobile Commerce
 - Monetization Model
 - Mobility + Biometrics = *Digitalization* of Identity

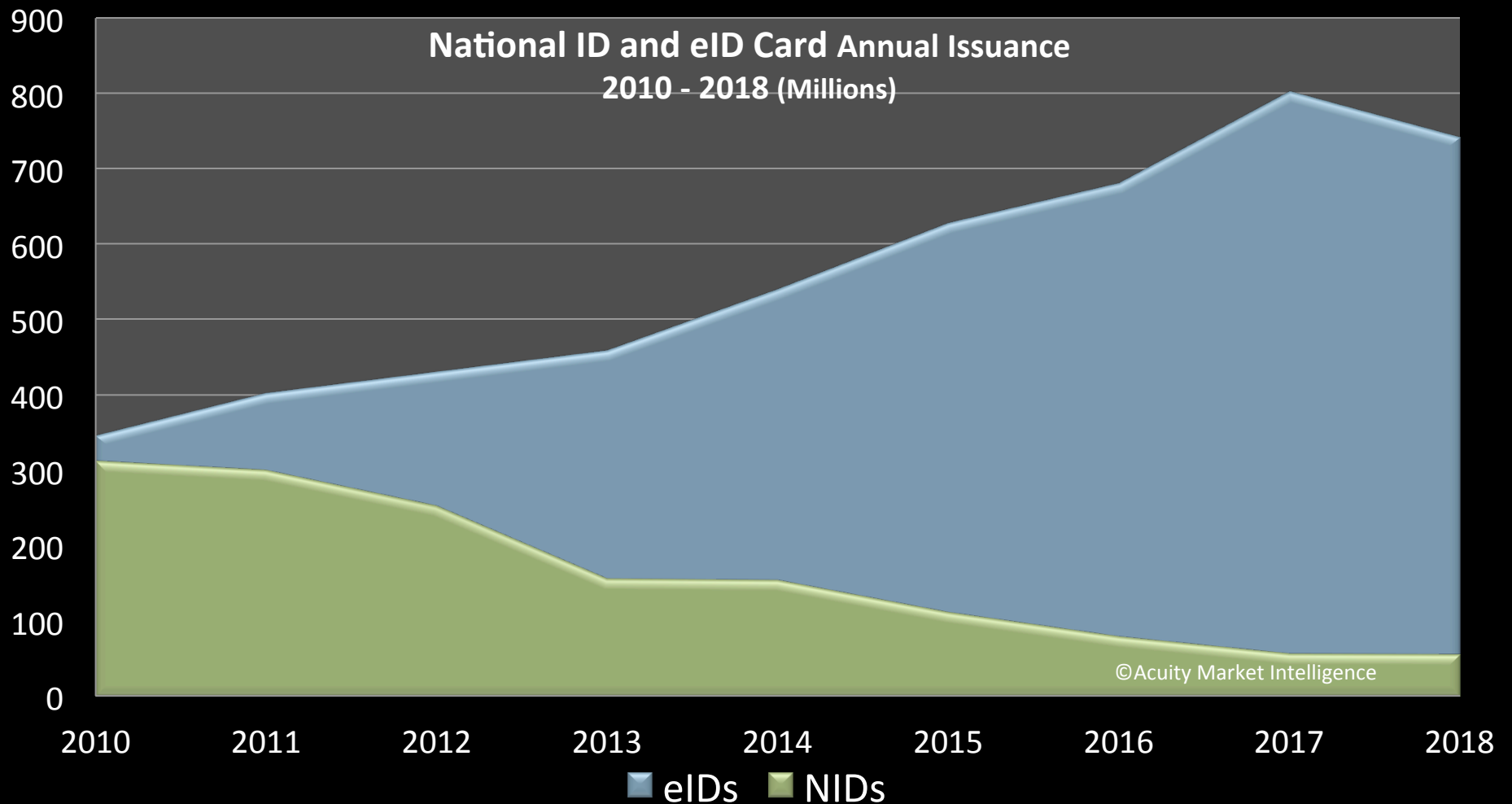
EPassport Market Annual Issuance



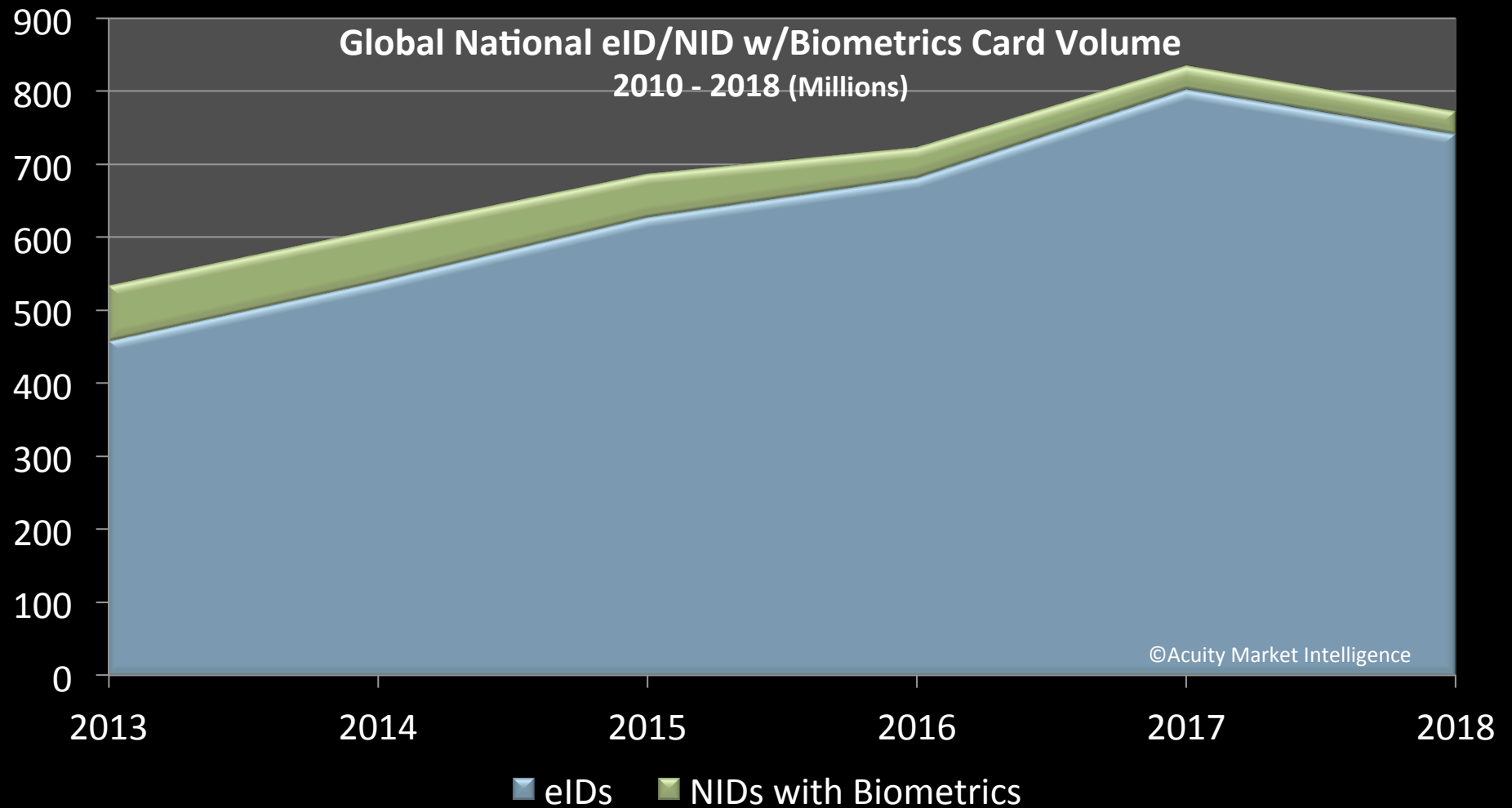
EPassport Market Circulation



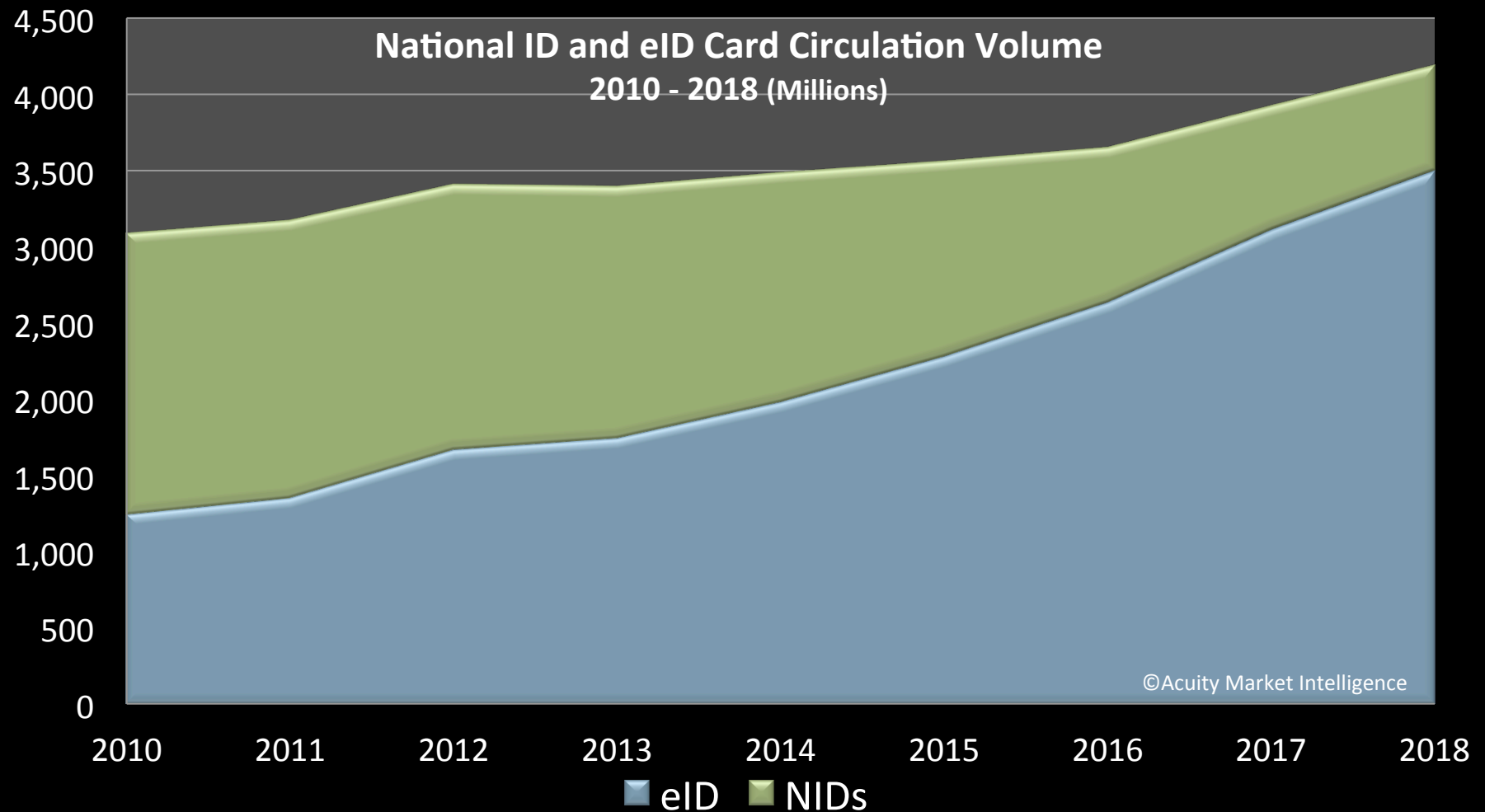
Global National ID Annual Issuance



Global National ID Annual Issuance



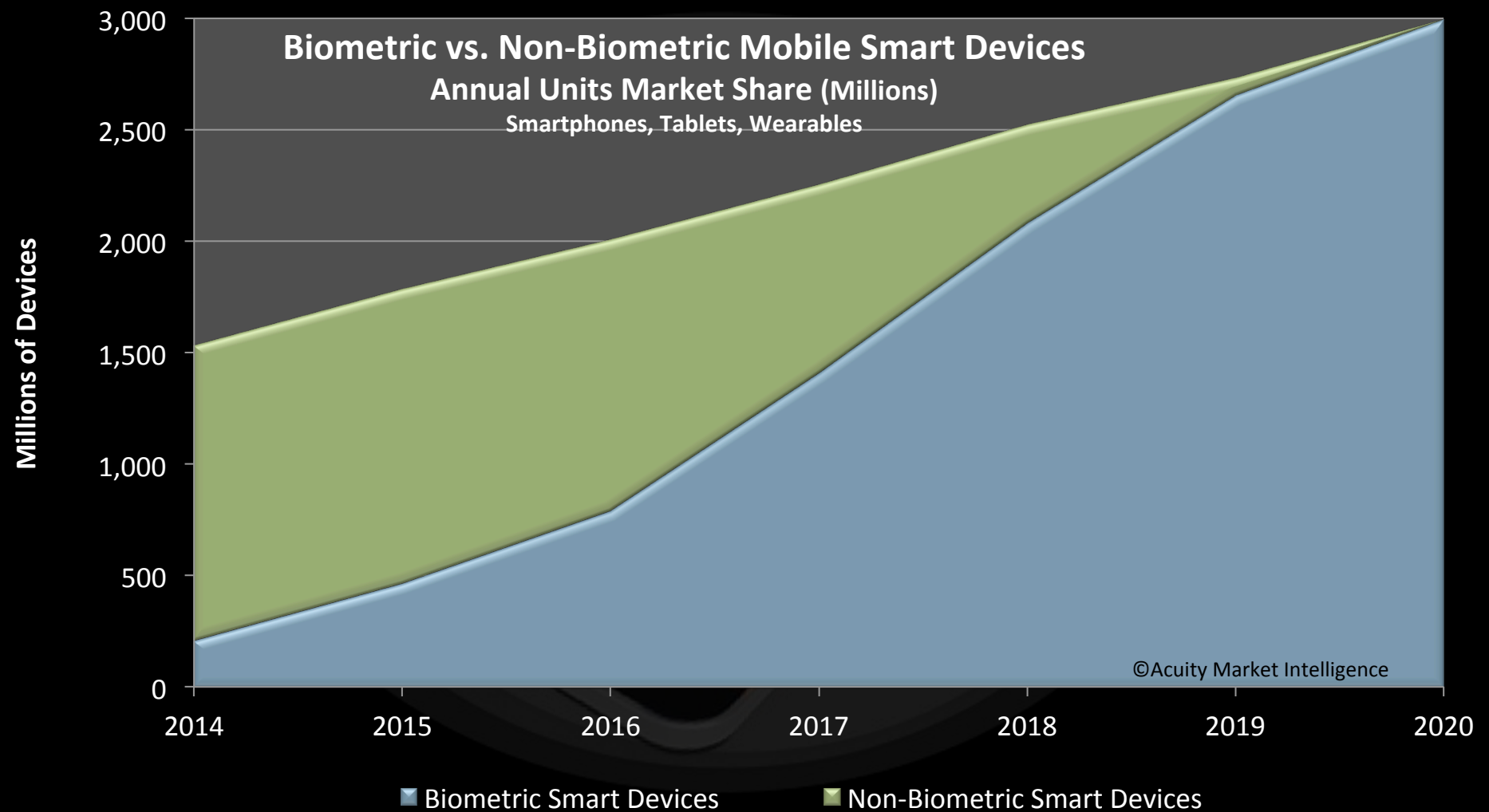
Global National ID Circulation



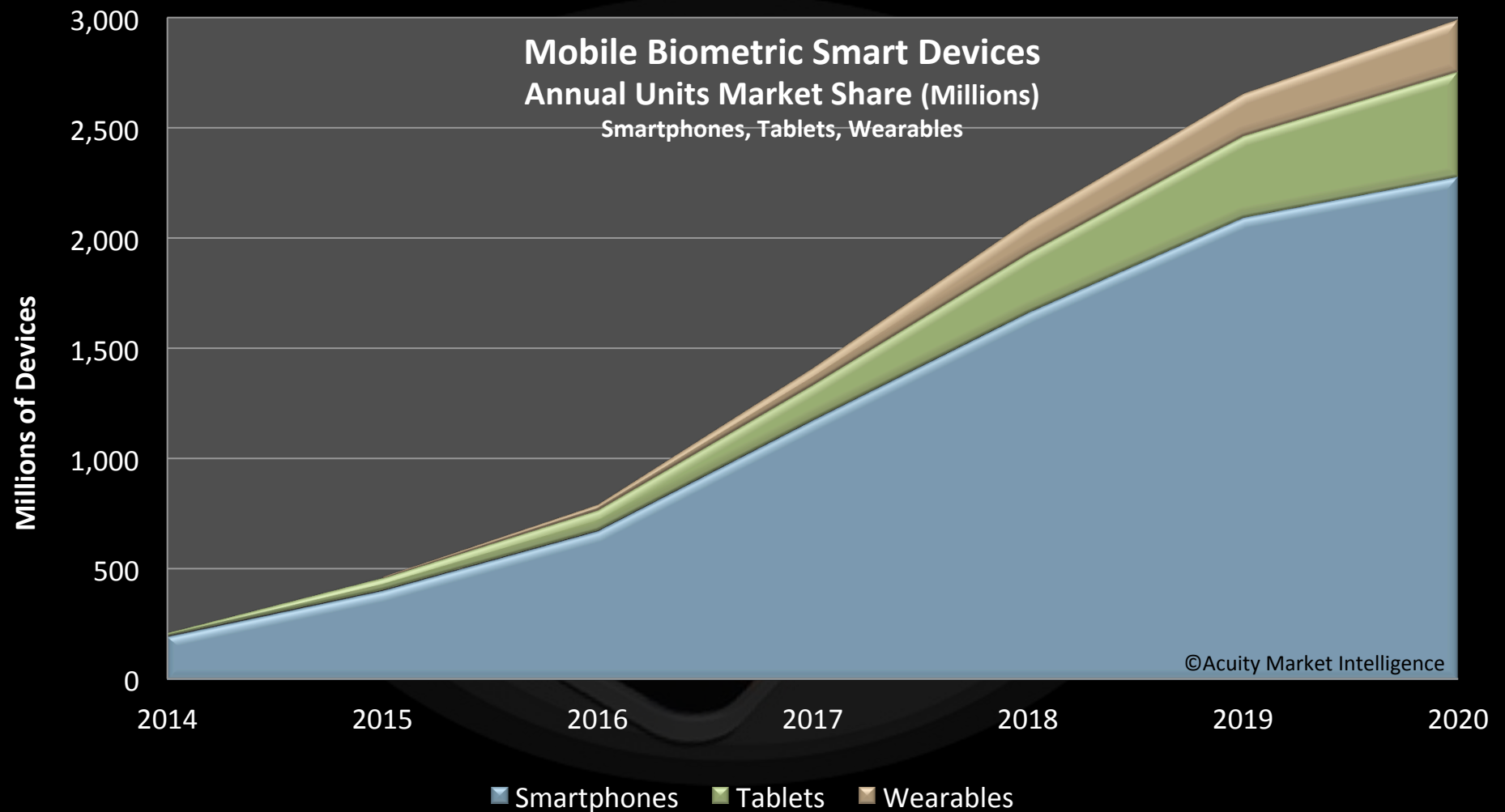
Global National ID Market

- National ID Holdouts
 - United States: 321M - formal not likely, REAL ID, Everify??
 - Japan: 127M
 - Philippines: 100M - Debating again
 - UK: 63M
 - Australia: 23.6M
 - Canada: 35.5M
- Big Countries In Process
 - India: 1.25 B - Planned 2017?
 - Nigeria: 181.5M
 - Russia: 146M
 - Mexico: 124M - Started, only kids

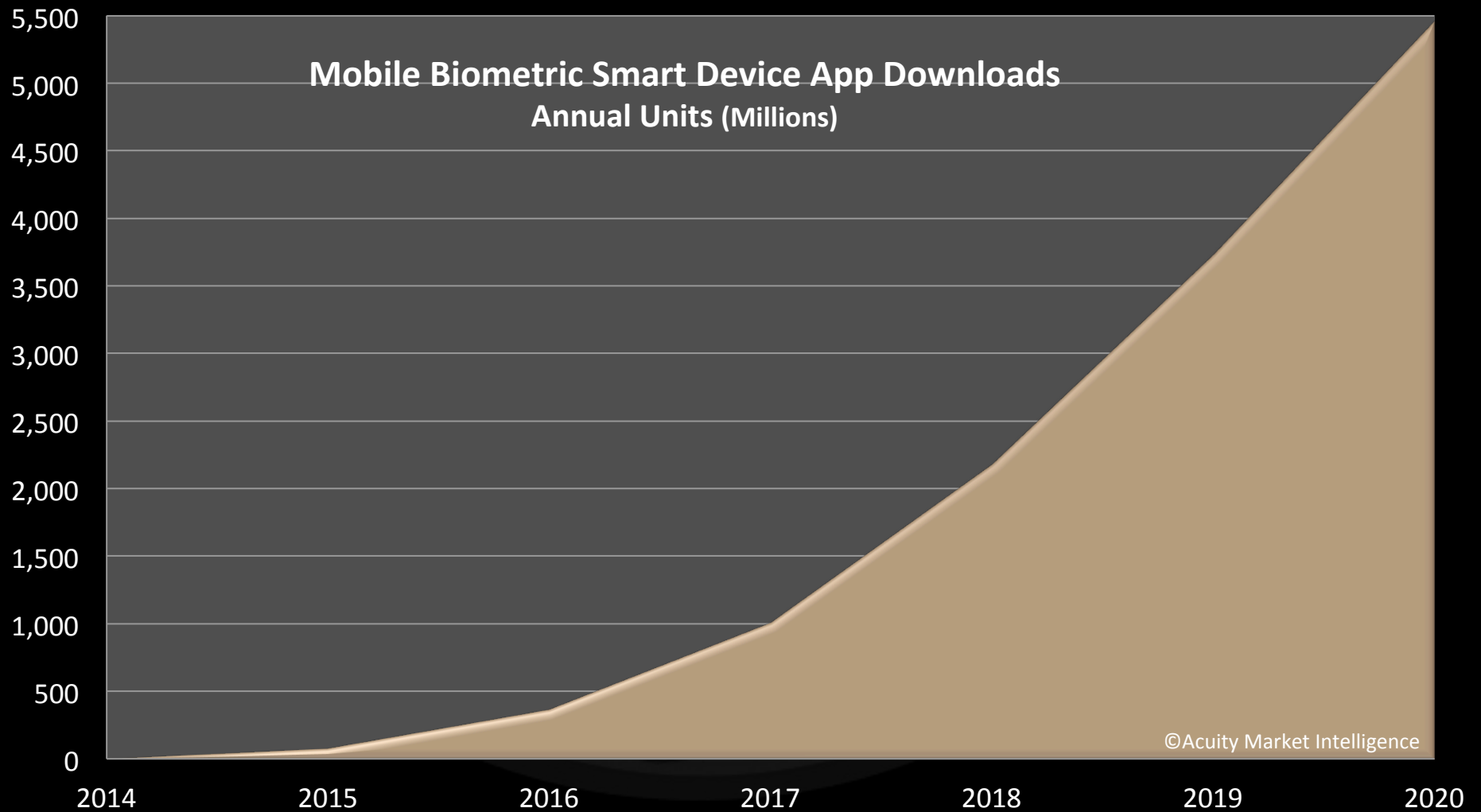
Biometric vs. Non-Biometric Devices



Mobile Biometrics Devices Annual Units

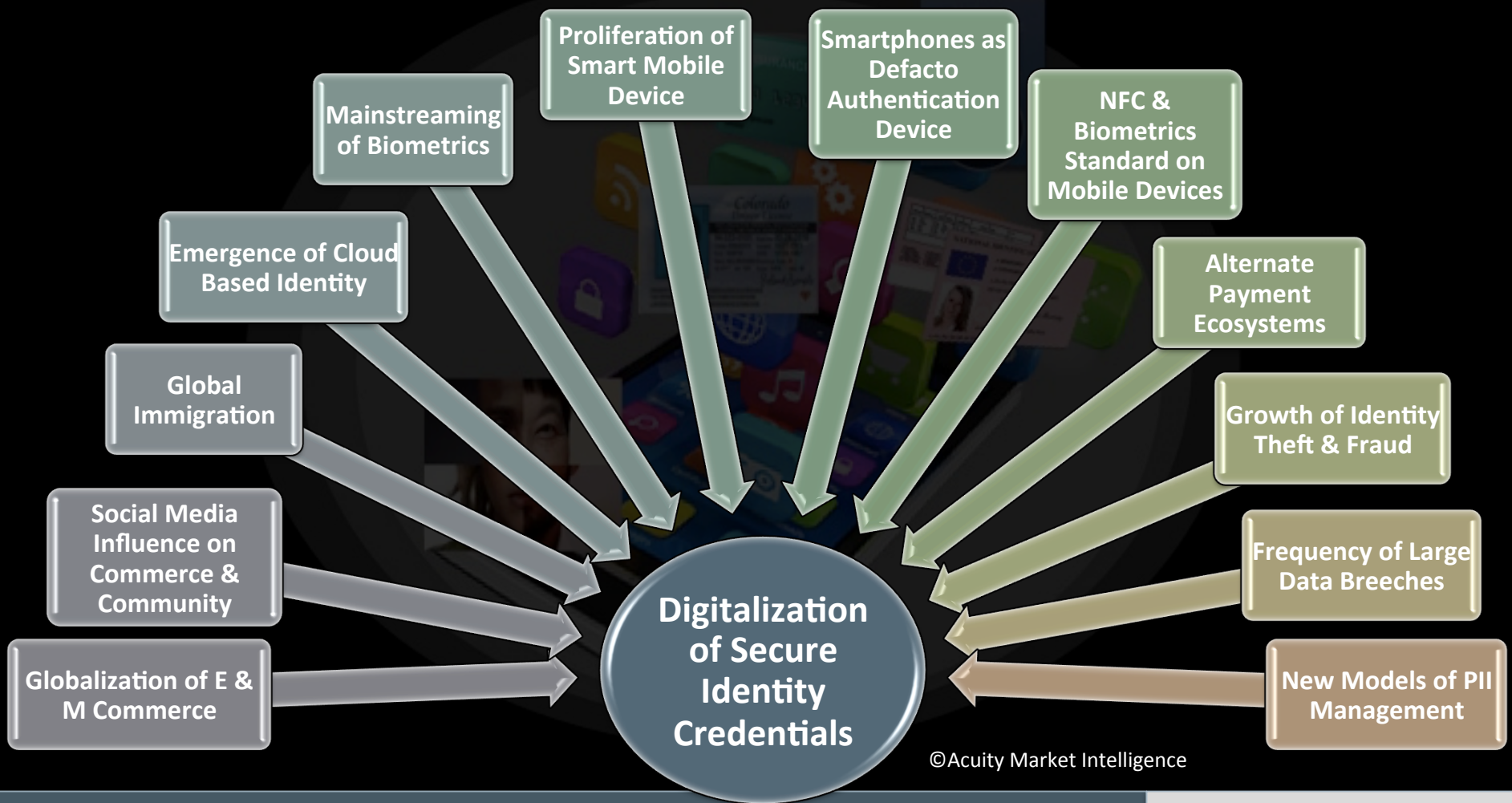


Biometric App Annual Downloads



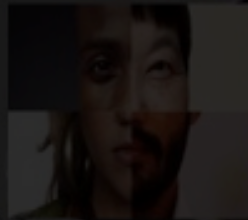
Converging Market Forces

Mobility is driving the digitalization of Secure Identity Credentials!



Foundation of Identity Market Disruption

- Evolution of Digital Identity → Identity 3.0
- Rise of “Consumer Centricity”
- “*Emergent Identity*”



Evolution of Digital Identity → Identity 3.0



Identity 1.0

- Centralized site-centric
- Privacy of the identity limited by privacy of the site Users
- Comprised of characteristics or data attributes:
 - Username and password
 - Online search activities
 - Date of birth
 - Social security number
 - Medical history
- Key areas of concern security & privacy



Identity 2.0

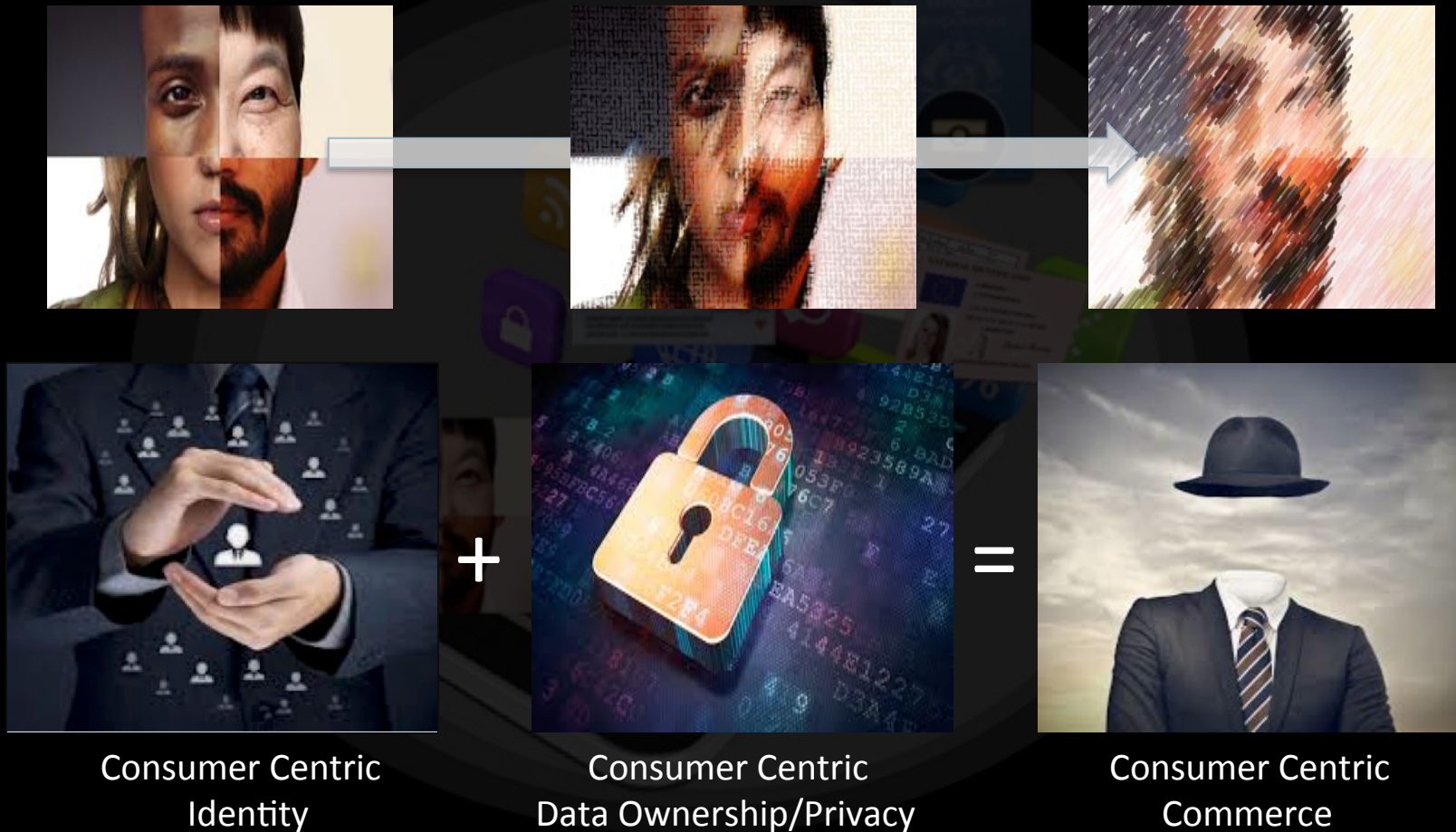
- Decentralized user-centric
- Emphasis on simple and open method of identifying transactions
- An ID that is transparent and flexible across Internet
- Can be Social Media based
- Sign in with Facebook, Google Plus, Disqus, etc.
- Key areas of concern security & privacy



Identity 3.0

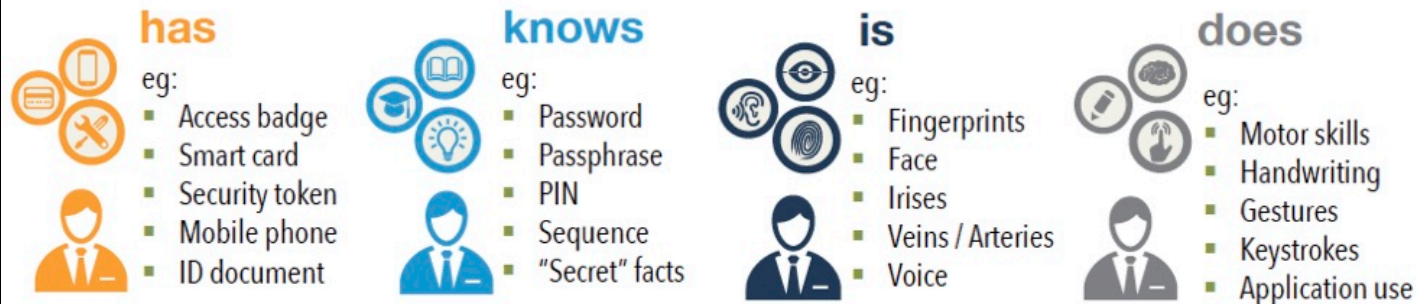
- “Next Gen” digital Identity
- Combines strong authentication (BIOMETRICS) with anonymity
- Increases privacy and provides user-centric control over PII
- Creates secure, consumer centric ecosystem for commerce

Rise of “Consumer Centricity”



“Emergent Identity”

What a person...



The **context** within which this information is captured

eg: ■ Geo Location ■ IP address ■ Links to others ■ Device used



Identification for Development (ID4D) Integration Study

Identity Market Disruption

- DISRUPTION on Multiple Fronts:

- Identity Credentials Merge with Mobile Devices.

How will “Identity Tokens” and associated security features translate as they become digital identity credentials merged with mobile devices?

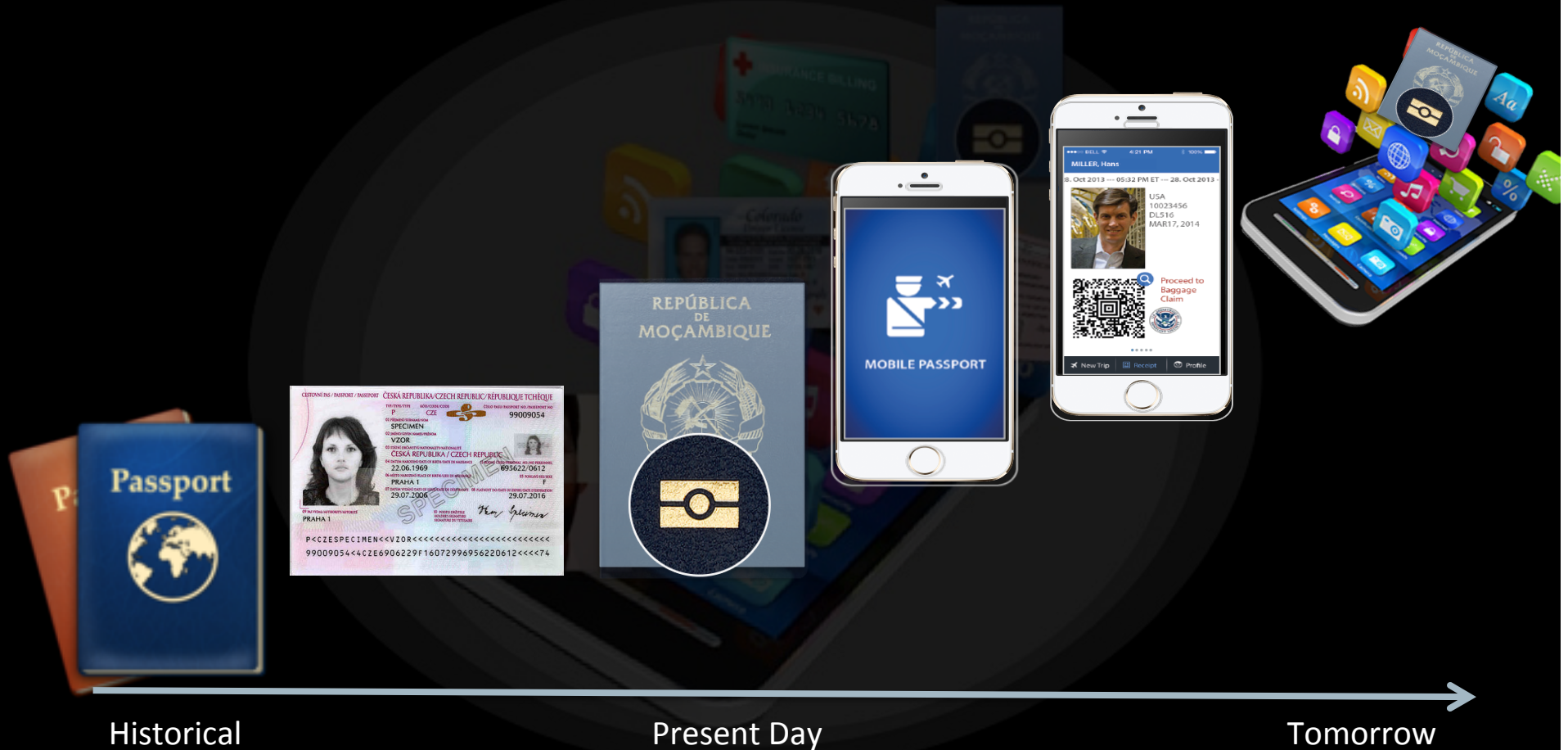
- Transformation and Convergence of Commerce and Privacy Driving Consumer Control of Identity and PII.

How will consumers use mobile devices to navigate complex, interconnected global ecosystems expecting frictionless access to information, communities, goods and services while their privacy is protected and their PII secured?

- Consumer Centric Data Aggregation Ecosystems Transfer Data Ownership from the Enterprise to the Individual.

How will enterprises that rely on the monetization of PII - accumulation, management, use, and sale - evolve or be displaced as a massive global platform based on personal mobile devices disrupts conventional business models?

Evolution of Secure IDs: Passports



Evolution of Secure IDs: National IDs



Evolution of Secure IDs: Driver's License



Identity Credentials



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Smarter Identity Credentials



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Identity Credentials Transformed



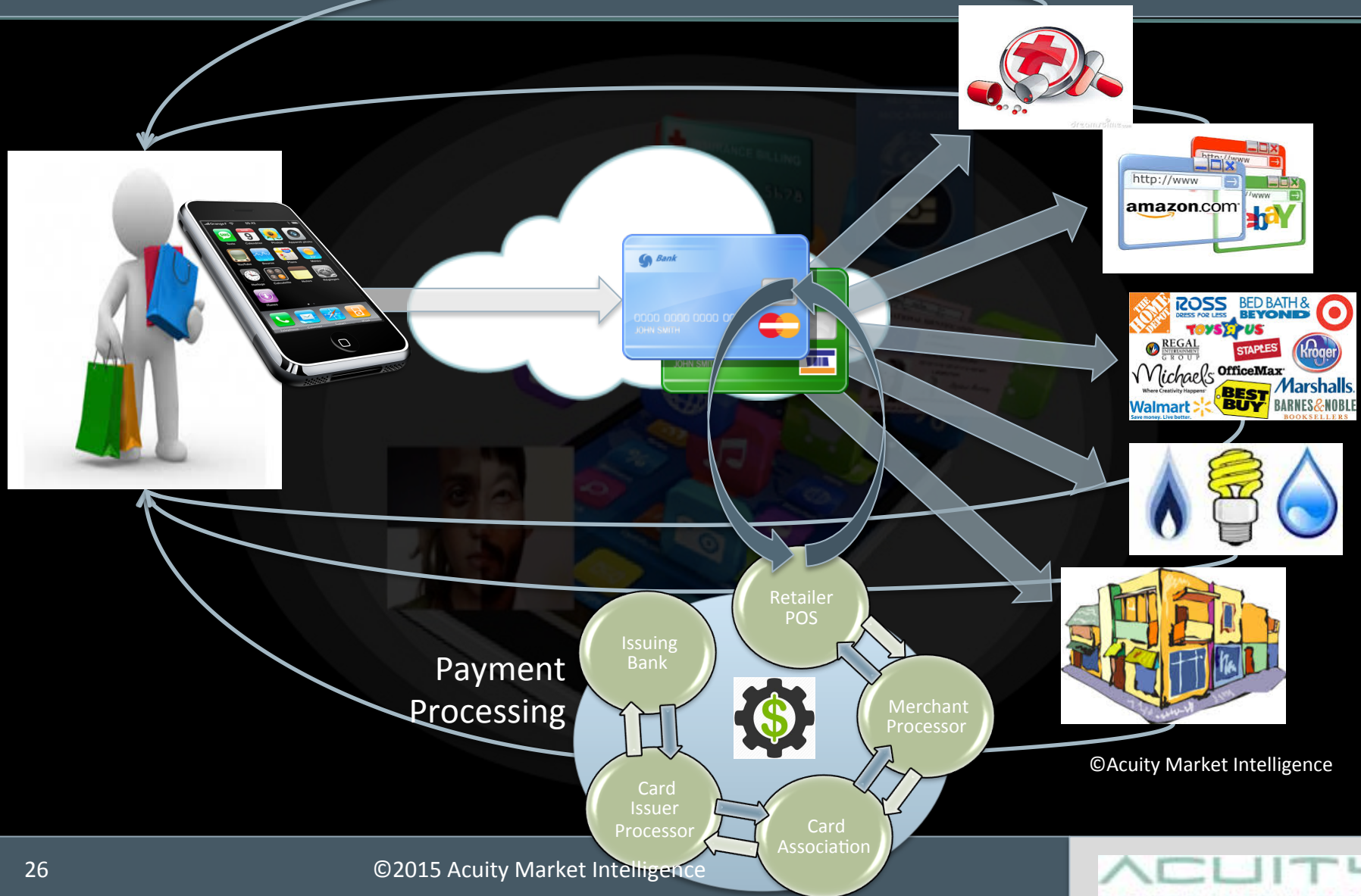
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Identity Credentials Disrupted

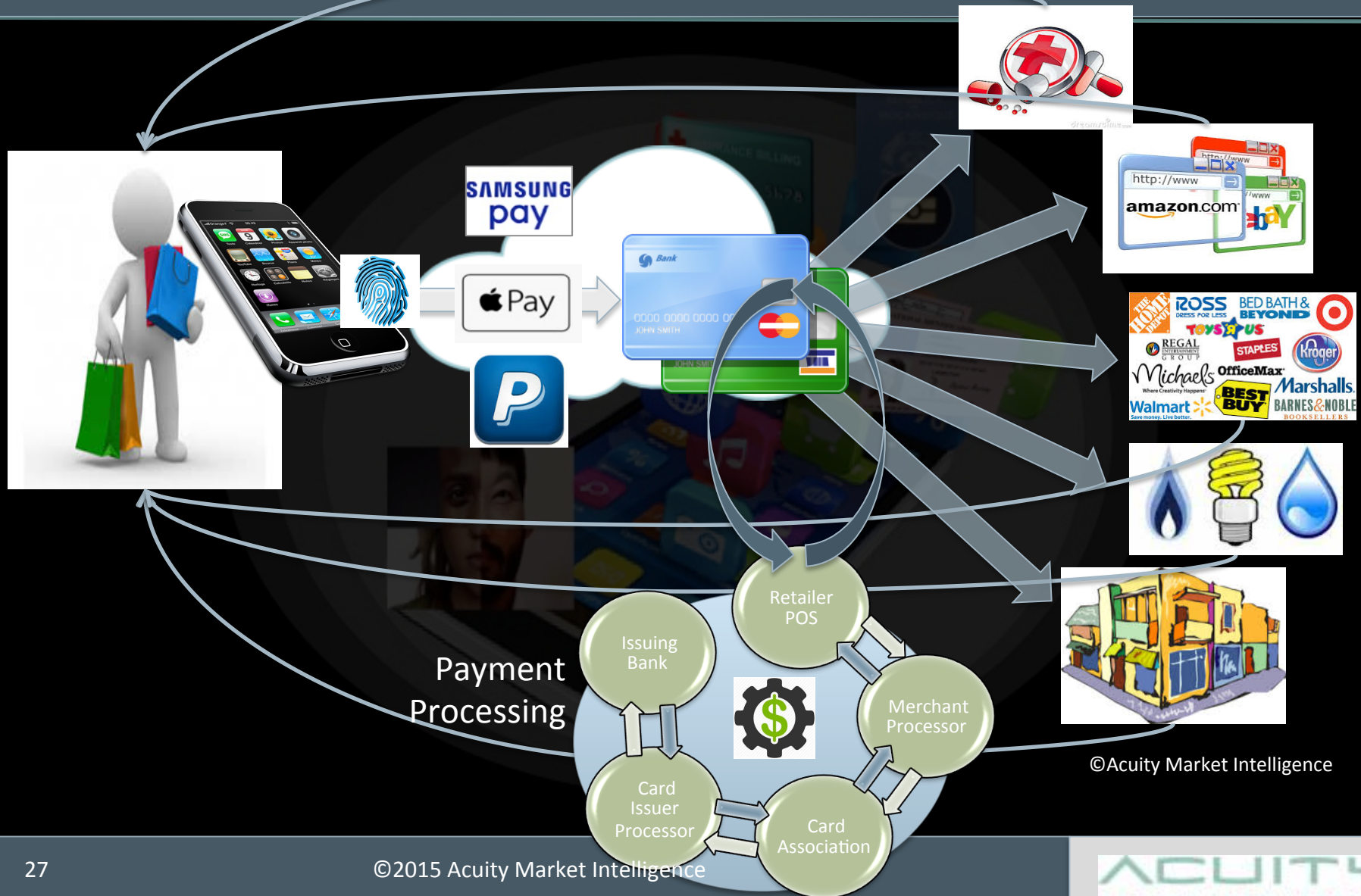


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Mobile Commerce



Mobile Commerce Convenience



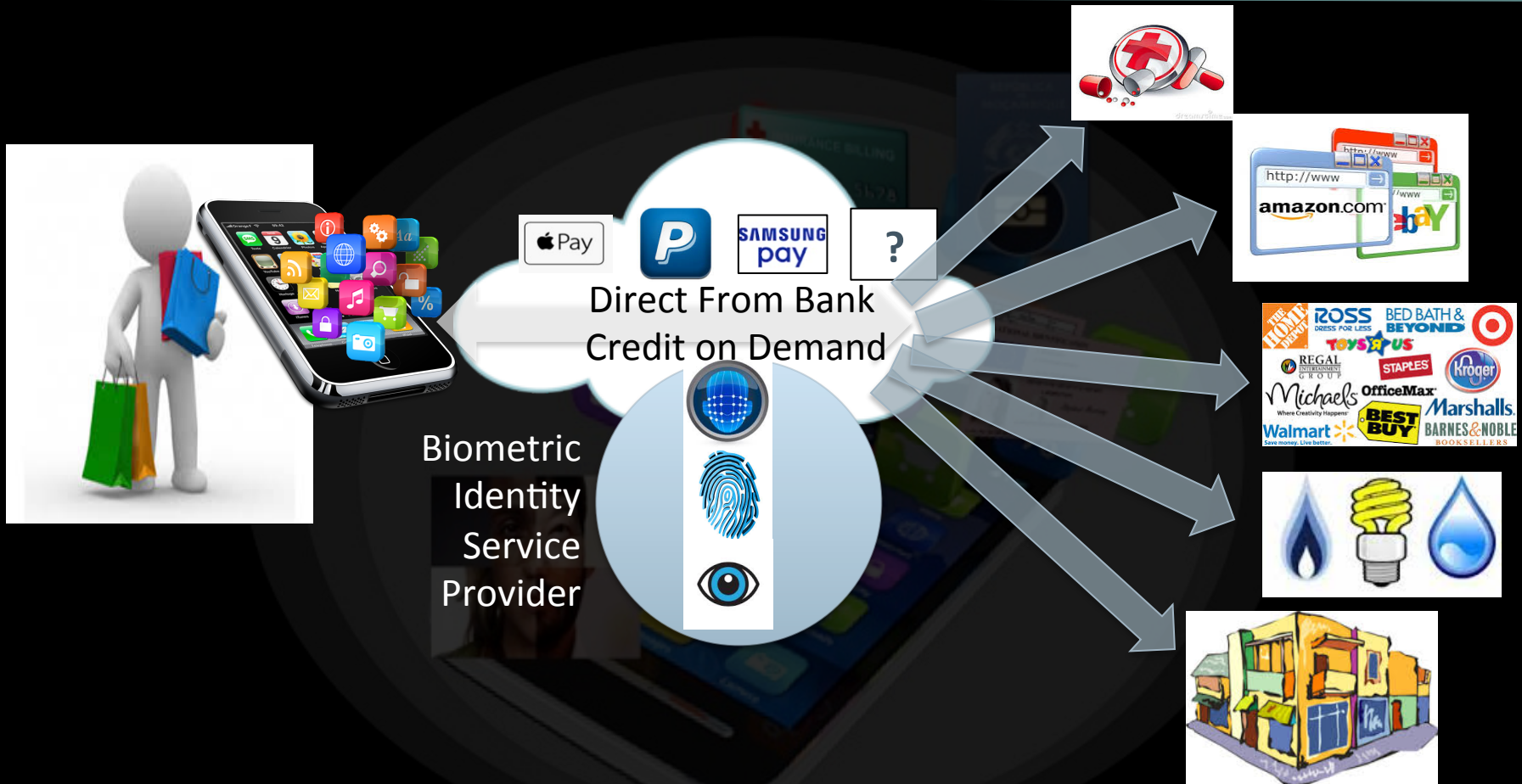
Mobile Commerce Transformed



Mobile Commerce Transformed



Mobile Commerce Disrupted



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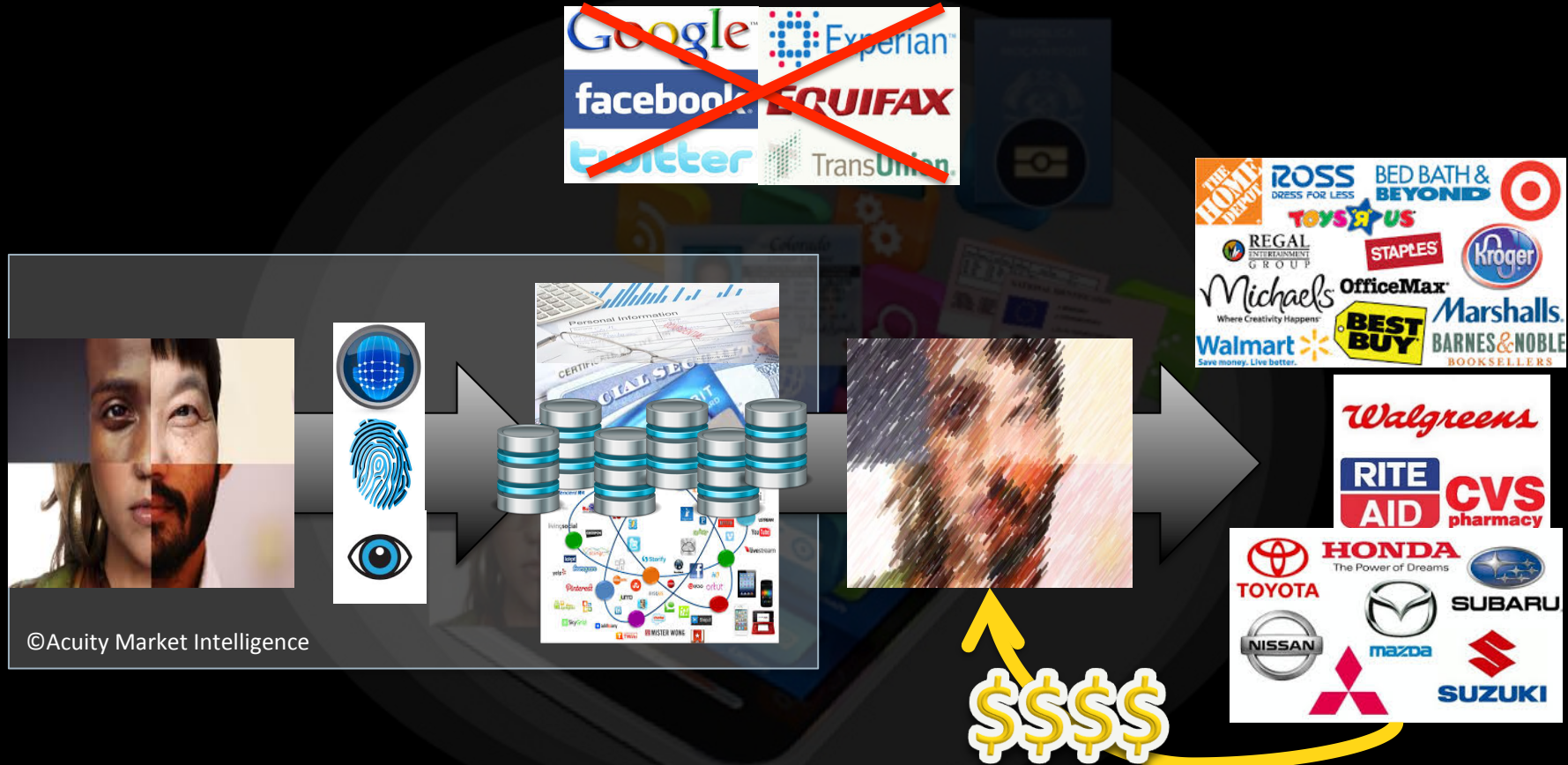
Monetization Model



Monetization Model Transformed



Monetization Model Disrupted



Mobility + Biometrics = *Digitalization* of Identity

- The *Digitalization of Identity* is Inevitable.
- Mainstreaming of Biometrics and NFC enabled Smartphones will provide the global platform.
- Government and Enterprises will take advantage of Digital Credentials to simply authentication, reduce token infrastructure costs, and improve security.
- Biometric based Digital Identity will transform Identity Credentials contributing to the disruption of global commerce and eGovernment as power and control of PII is shifted from “monetization” enterprises to consumers/citizens.
- Significant challenges will have to be overcome: certified devices and digital credentials, standardization and interoperability of credentials, readers, privacy requirements, security protocols, legislative and regulatory frameworks, etc. Non trivial but will be handled incrementally over time.

Thank You!

Visit www.acuity-mi.com

for more insight and analysis:

Global Biometrics Industry Report

Global National eID Industry Report

Global EPassport & EVisa Industry Report

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Coming SOON: Biometric Mobility and the Enterprise