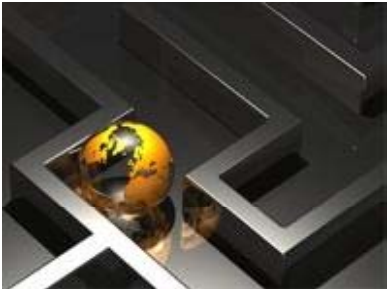


The background of the slide features a large, semi-transparent graphic of a maze with a glowing globe in the center. The maze is composed of grey, three-dimensional-looking walls. The globe is yellow and orange, with a bright light source creating a lens flare effect. The overall aesthetic is futuristic and technological.

Large-scale Biometric Systems

Trends and Directions

Leo Ring
Vice President – Americas Region



Daon Software Platforms Power Many Complex Biometric Programs...

Credentialing

Daon technology is used in a wide variety of credentialing programs...

- Transportation Worker Identity Credential (TWIC) 1.9M Cards
- Largest International Defense Contractor
- Military Personnel Base Access Credential

Border Management

Daon technology plays key roles in national border control systems in...

- Japan
- United States
- South Africa
- New Zealand

National ID

Daon technology provides the core identity platform component of National Identity programs in...

- India
- Mexico
- Qatar

Trusted Identity Services

- Facilitates biometric based background checks for over 500 different organizations
- To-date over 6M biometric/biographic background checks performed
- A growing list of government and commercial clients

Immigration

Daon technology manages immigration and citizenship programs in...

- Australia
- United States
- European Union
- South Africa
- Qatar

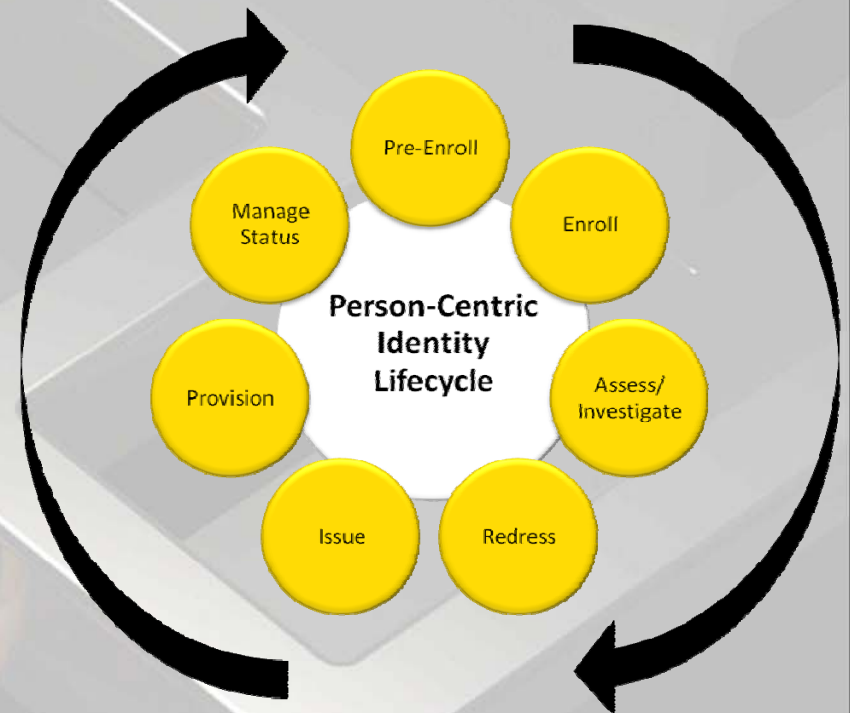
Other Applications

Daon technology is also used in a variety of other applications, including...

- Law Enforcement / Intelligence
- Prisons
- Drivers Licensing
- Physical Access Control

Our Platforms Core Capabilities

- Biometric process management
- Biometric data and quality management
- Biometric transaction management
- Matcher management
- Matching results management
- Biometric transformation
- Provisioning biometric data to external systems
- Biometric service level management



Flexible Identity Processing



Model EOU3000
For Enrollment

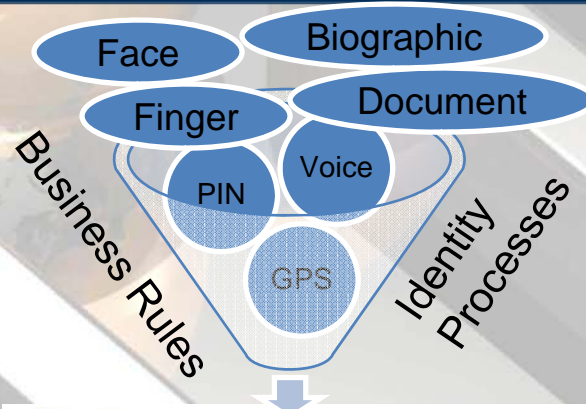
hPrint™ 4x4 Slap
Live Scan


Precise 250 MC

Model BM-ET330/330E
Model BM-ET300/300A

PalmSecure™

Identity Acquisition



 DaonEngine

Evolution of Biometric Systems

From

Single Mode & Algorithm Provider

One Usage Scenario

Standalone

Single Supplier Custom Solutions

All Transactions Are Equal

Biometric Used As Security Enabler

To

Multi-modal & Multi-Algorithm Capability
(Filters, Ranking, Fusion)

Multi-Usage Scenario
(Business case driven)

Multi-Protocol Service-Oriented Architectures
(Flexibility)

Multi-Vendor COTS based
(Ease of Adoption for new biometrics)

Policy Driven Transaction Management
(Response Time & SLAs)

Modernized Infrastructure to Defend the Integrity of
the Biometric System Itself
(Insider and outsider attacks)

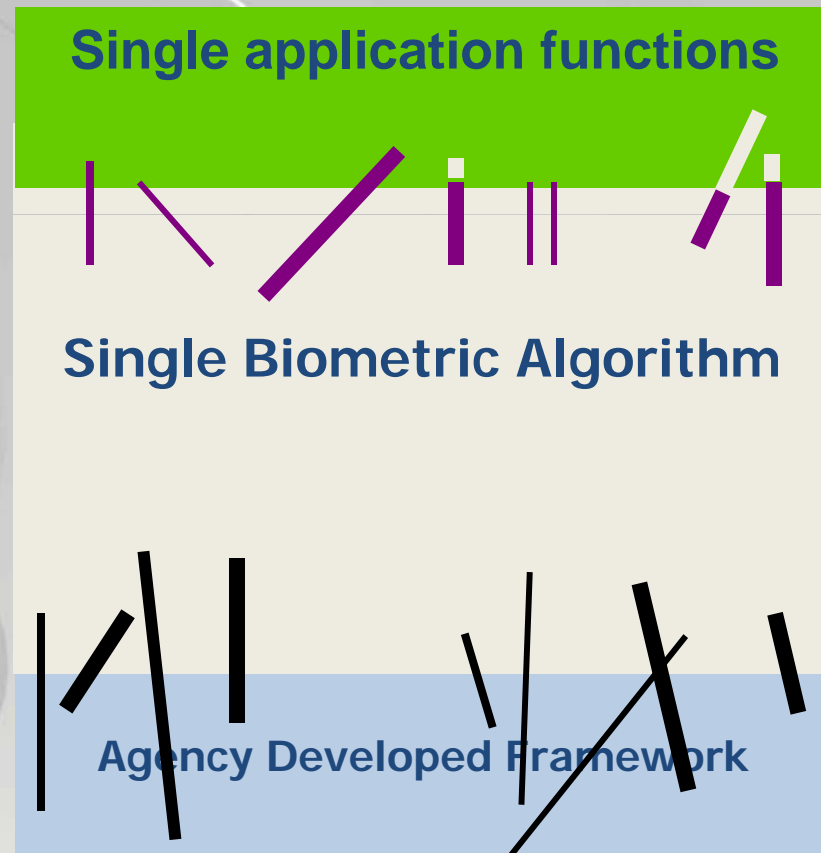
*Many new projects are looking to implement a “flexible architecture”
to rapidly provide new capabilities*

Legacy “Stovepipe” Architectures



Following functions all embedded in stovepipe biometric application

- Population management
- Business continuity (if implemented)
- Matcher control





The Problems With Legacy Stovepipe Systems

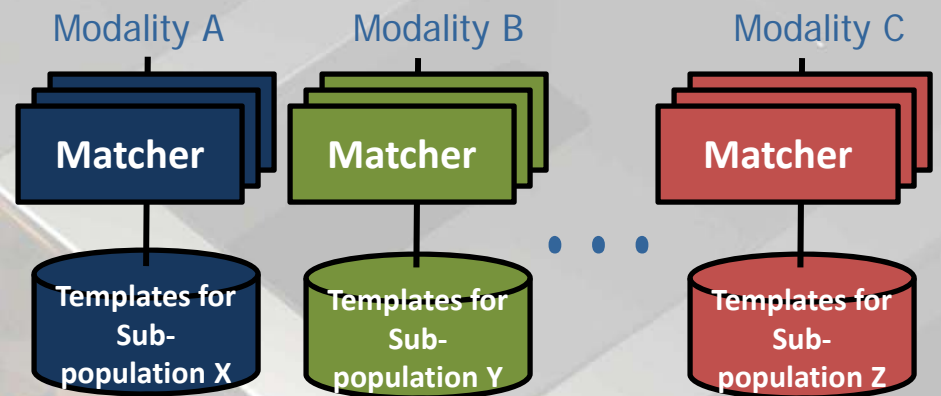
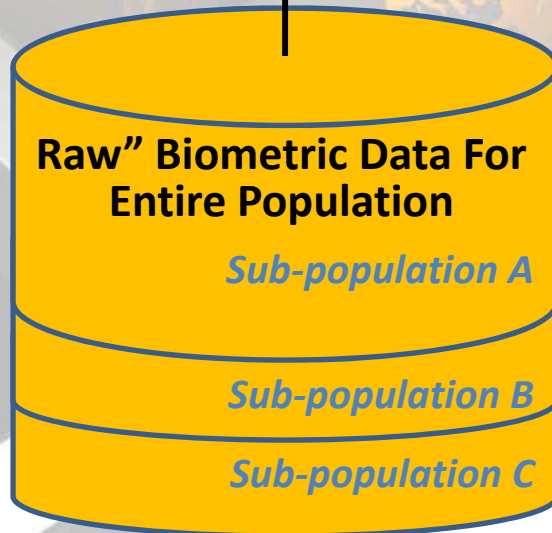
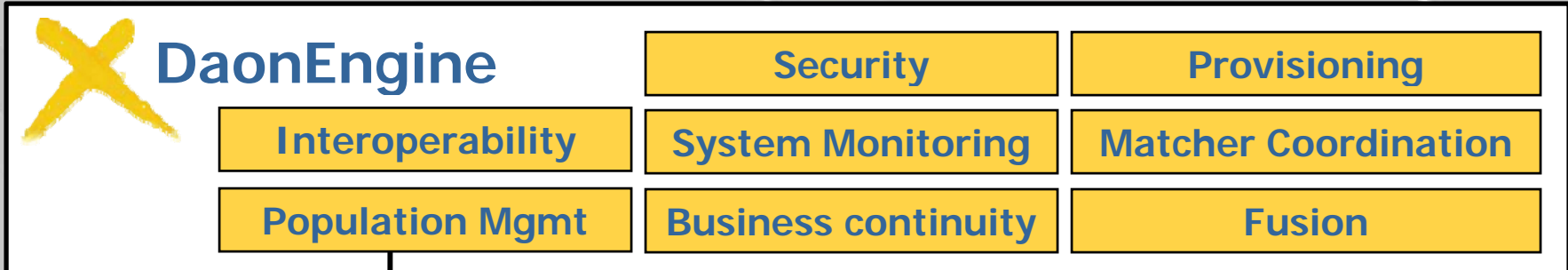


- Applications are tightly coupled to biometric events and specific technical solution
 - No algorithm independence
 - No device independence
- The framework is proprietary
 - Only the original supplier is capable of working within this framework
 - Framework built to support this single application
 - Expansion to new applications difficult
 - Not designed to integrate within a Department's enterprise architecture
- All transactions are treated the same
 - No differentiation of biometric modality, accuracy, false accept rates, or response times among different stakeholders
 - All records searched all of the time

As Biometric Technologies Mature

- Technology trends include:
 - Multi-modal and fusion have become mandatory
 - Matching as a service
 - Customers are interested in solutions that manage different populations (immigrants, citizens, employees, persons of interest)
 - CyberSecurity is a real issue,
 - Biometric systems are targets for attacks,
 - Not just at the front end where somebody has tried to have their fingerprints altered or tries to “spoof the system”
 - but also at the back end where data insertion, deletion, manipulation are real issues

Modern Architecture



Eco system of matchers tailored to end-user demands and sub-population characteristics

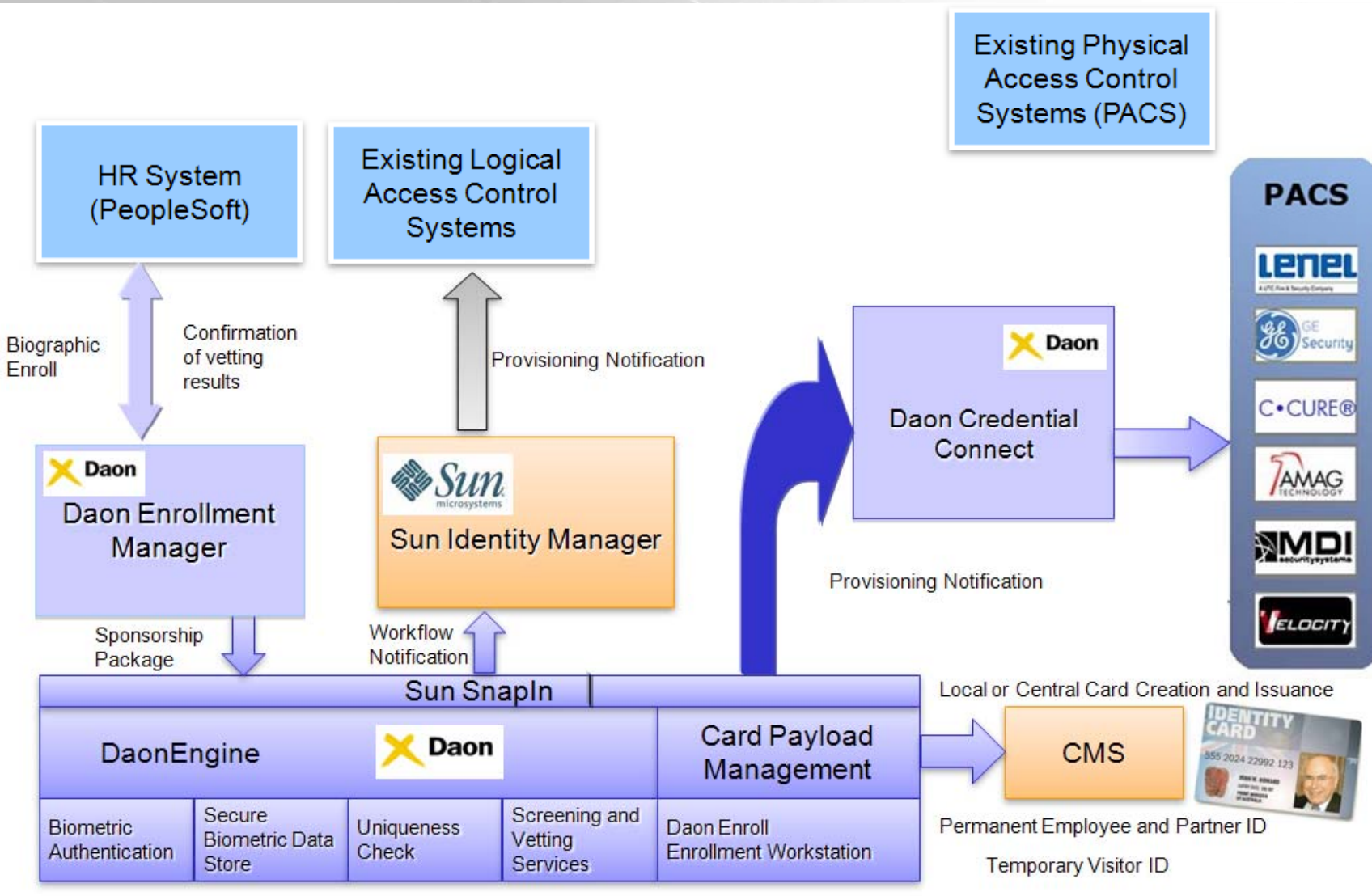


The Move Towards Biometric Ecosystems



- New systems architectures are driving major shifts in biometric systems contracts, capabilities, and price-points
- Multi-Matcher Management
 - Transaction and Supply-Chain based business model
 - Gallery management
 - Distribution of workload
- Real-time matching and transaction management
- Information sharing

Physical and Logical Convergence Daon



The World is Changing

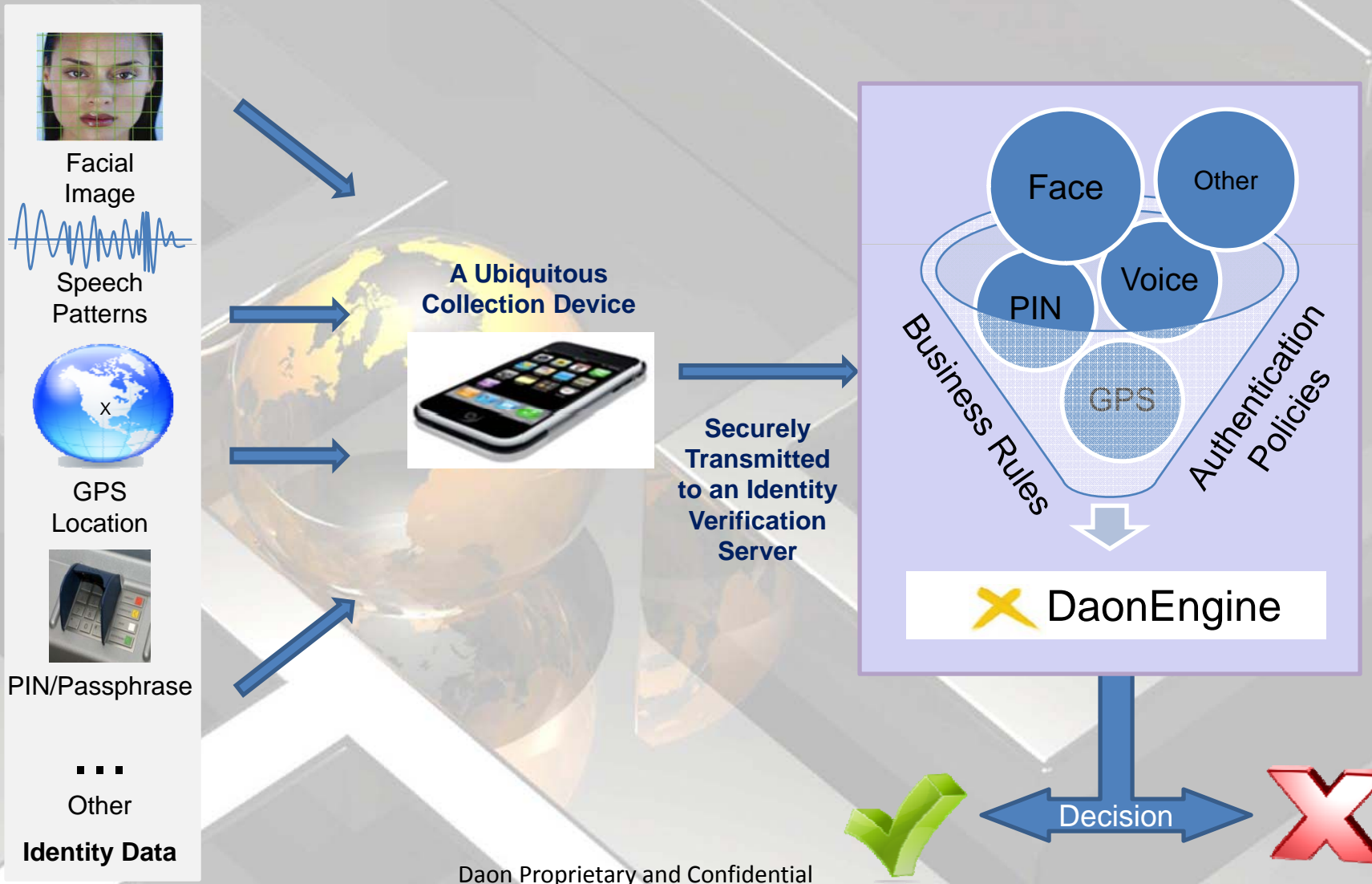
- We are at the pivotal intersection of two fundamental & global paradigm shifts
 1. The move to digital interactions
 - Has been occurring since the web went mainstream
 - Social networking leading to great online presence
 2. The emerging ubiquity of connected mobile computing devices (e.g. smart phones)
 - Massive consumer adoption
 - Always connected, managed computing platform in your hands at all times
 - Greater utility beyond handset
- The following concepts are changing radically:
 - The concept of a personal computer
 - The concept of a telephone
 - Global reach of wireless networks
 - Human concepts of interaction
- The Internet provides the socio-economic fabric for the digital age
... but... what is missing?



The missing component for frictionless, pervasive digital interaction is no longer human acceptance, physical devices or network infrastructure ... it's Identity Trust combined with Privacy!



Identity X Overview





Muchas Gracias

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