Identity and Access Management

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Agenda

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- Step Zero – Identification and Credentialing
  - Who are you giving that badge to?
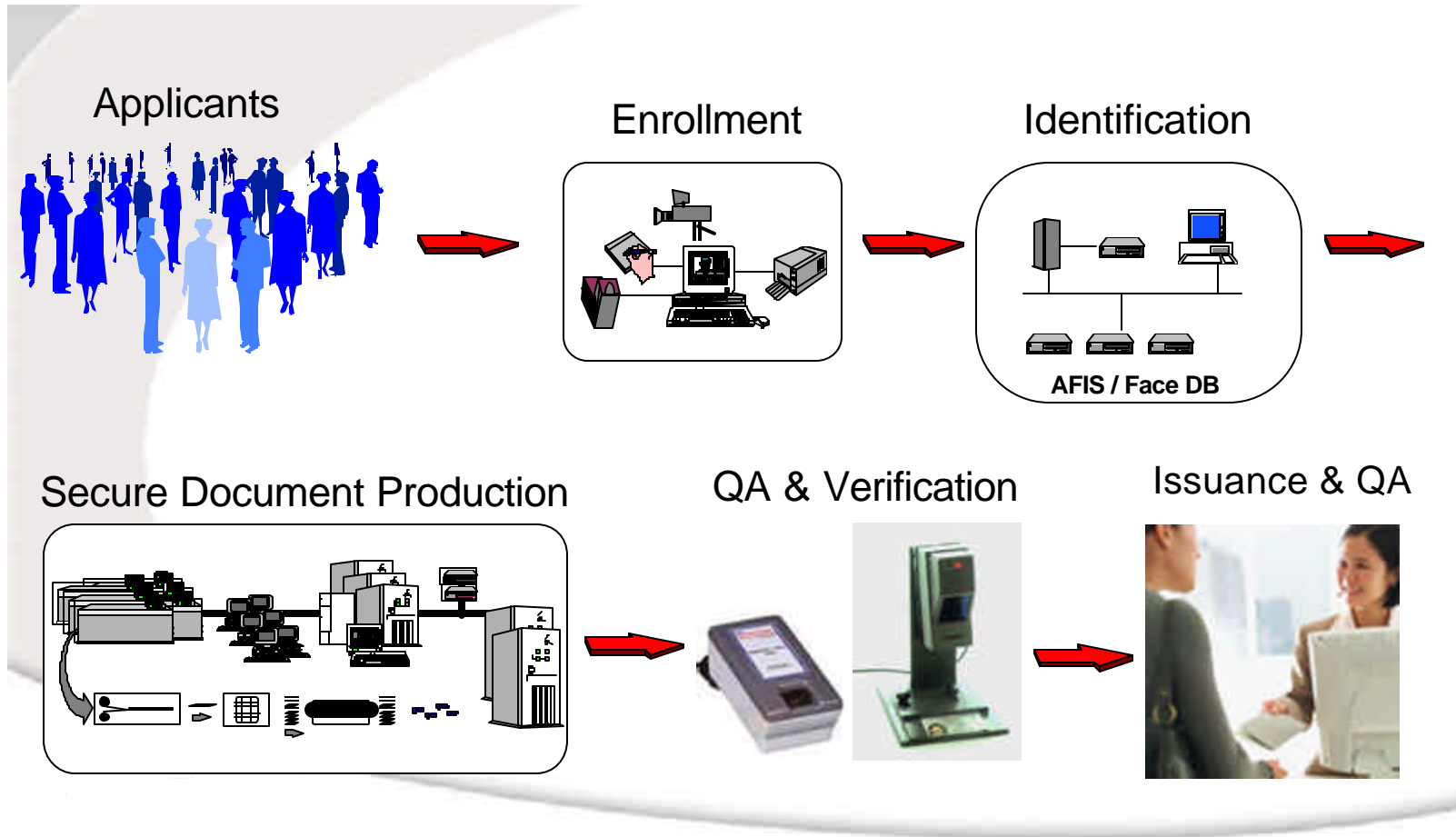
- Access Control – logical & physical

Oracle

- Identity Management

- Authentication

What Is Identification & Credentialing (I&C)?

- Identifying people (driver's licences, other citizen ID cards , employee ID cards, etc.)

- Verifying people (e.g. replacement of lost documents, registered traveller)

- Producing and verifying their credentials (e.g. birth certificate, citizenship certificate)

- Identity Fraud Detection

- Smartcards

- Access control of people (e.g. to buildings), smart buildings

Functional Flow: End-to-End

Applicants

Enrollment

Identification

AFIS / Face DB

Secure Document Production

QA & Verification

Issuance & QA

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Functional Identification Needs

- Identification, Enrollment, and Identity Management

- Duplicate Detection and Image-Based Processing

- Secure Document Production and Issuance

- Security and Privacy

- Multi-Channel Access and Service Delivery

- Interfaces to Internal Agencies and External Organizations

- Workflow Management and Rules

- System Administration and Monitoring

- Often Revenue Collection and Processing

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Key Functional Processes

Create application

- Online or offline
- Capture demographics
- Capture biometric(s)
  - Fingerprints, 10-print
  - Signature
  - Portraits, iris
- Extract facial template
- Finalize application
- Check for duplicates (1-N)
- Fraud investigation

Approve registration

- Perform 1-1 verification
  - Online or offline
- Print credential
- Issue credential
- Scan document & retrieve info
- Authenticate document
- Check watch list
- Manage users

Architectural Drivers

- Multiple **biometrics** (fingerprint, iris, facial etc) and multiple **vendors** to fit organizational preferences, budget requirements and local support issues

- Multiple **"controlled document" production technologies** with different **providers** to fit across the domains and organizational sophistication

- Wide variability in **business workflows** and rules to fit operations and jurisdictional needs

- **Deployment variability** and **scalability** to wide range in implementation size

- **Extensibility** (bigger or smaller) to aide varying implementation strategies like incremental deployment and legacy interoperability

- Facilitate **rapid deployment** of new biometrics and technologies

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Client Interface (Online and Offline)

- Biometric capture device abstraction / plug-and-play

- Biometric quality assessment and scoring

- ID document print management

- Biometric configuration (number/order of fingers, etc.)

- Application configuration

- Automated image enhancement (cropping, centering, etc.)

- Smart caching

Application Services

- Manage registration applications
- Watch lists
- Biometric identification
- Workflow
- Identity lifecycle
- Agency connector
- Inventory control
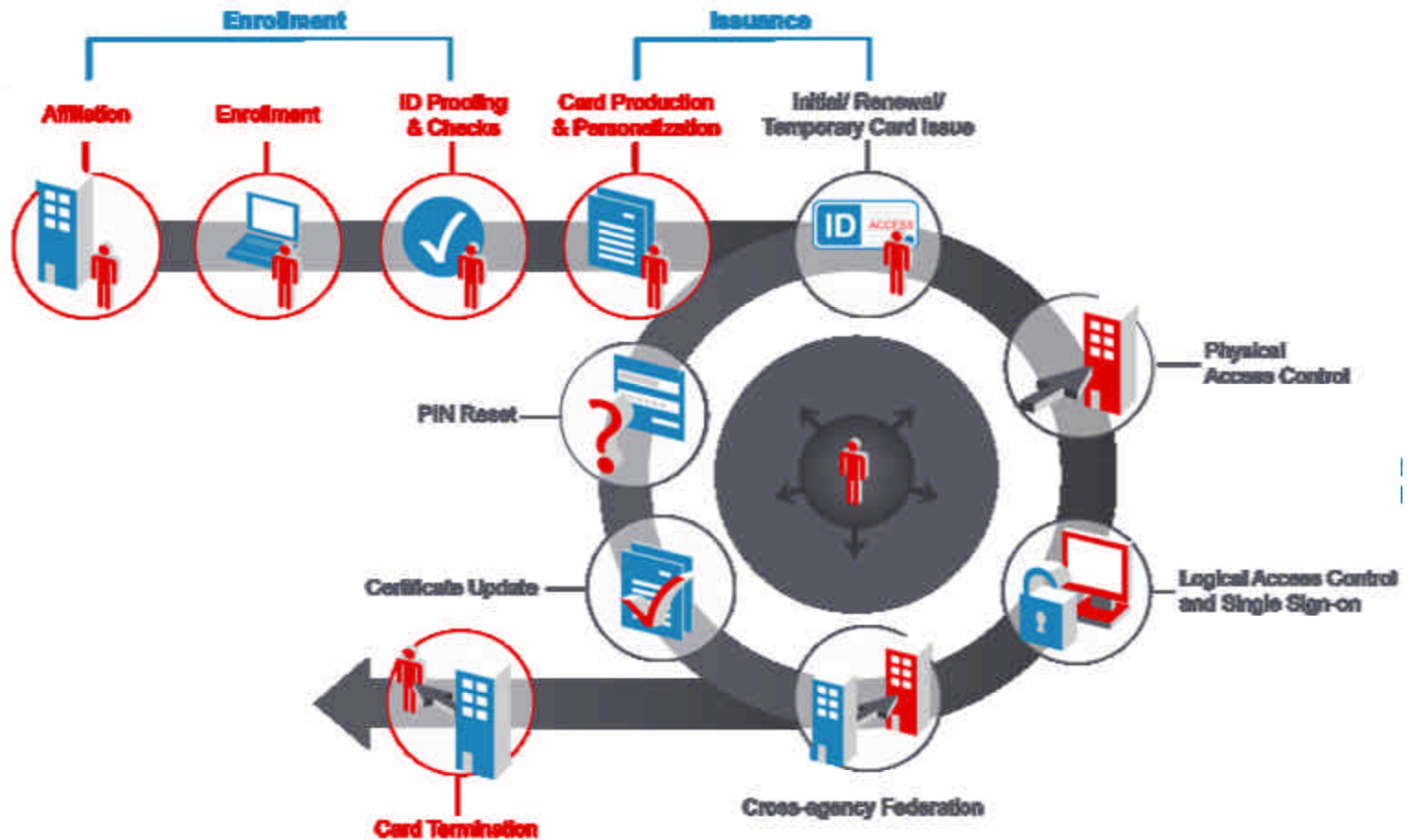- Task management
- Audit

Backend Services

- Service oriented architecture (SOA)

- Configurable, workflow-based business process management (BPM)
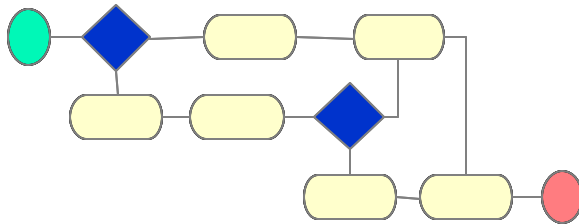
- Event-driven orchestrations

- Multi-biometric match choreography

- Security framework integration

Lifecycle of a Strong Identity Credential

Agency Interfaces

- Motor Vehicles

- Justice & Public Safety

- IAFIS

- FBI

- Interpol

- Social Security Administration

- Bureau of Vital Statistics

- Health & Human Services

- Other federal, state, and municipal agencies

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COTS & Open Source Components

Many elements available in the market:

- Biometrics Middleware

- Card Management Server

- Key Management Server

- Workflow Engine

- AFIS Server

- Face Matching Server

- Iris Matching Server

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Unisys Solution Offerings

Client Needs (Public and Private Sectors)

Secure Citizen Solution	Immigration & Border Control Solution	Registered Traveler Solution	Employee/ Worker ID Solution	Intelligent Video Surveillance	Physical/ Logical Access Control	Other Biometrics

Unisys Services

RAPIDS Framework	Non RAPIDS
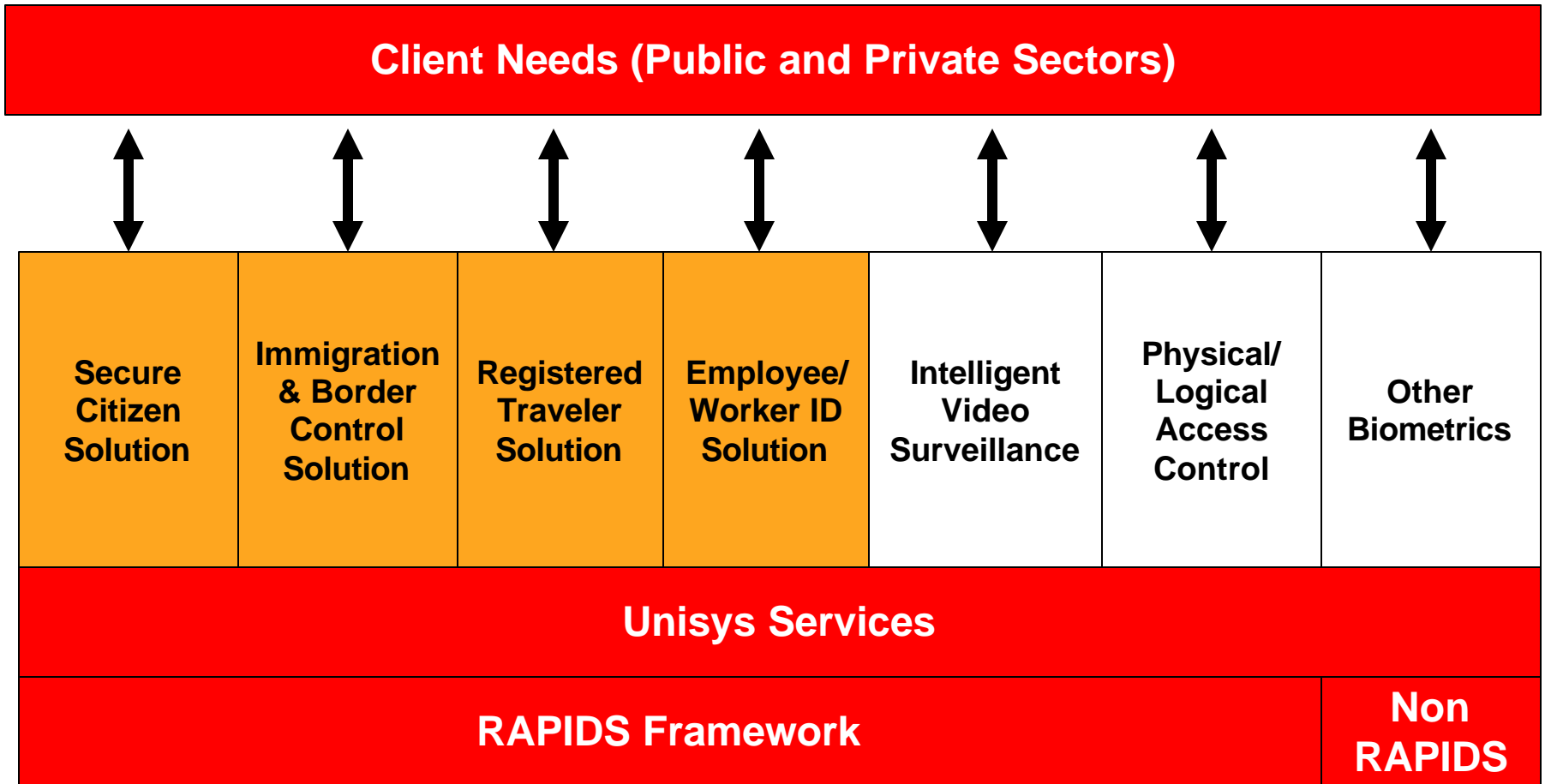
RAPIDS = **R**egistry **A**nd **P**ositive **ID**entification **S**olution

RAPIDS Framework

Registration

Credentialing

Identification and Credentialing

Citizen ID		Access Control (Physical)
National ID/ Multi Purpose Cards	National Drivers License	Border Control
Traveler ID		Passenger/ Baggage Processing
ePassports	Registered Traveler	Traveler Risk Analysis
Worker ID		Risk Monitoring System
HSPD 12	TWIC	Secure Retail Banking
		Retail Payments / Customer ID Mgmnt

IT – Identity & Access Management

Identity Repositories	Authentication & Access Control	Provisioning Credential Management	Identity Enabled Enterprise

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Unisys Qualifications

National ID Cards
- Malaysia (GMPC) MyKad
- South Africa HANIS
- Costa Rica Voter ID

Driver License
- North Dakota

Access Control
- Airport Access Control Pilot Project

e-ID
- Registered Traveler

Border Patrol
- SBInet
- US – VISIT Exit
- Chile Border Police

I&C Portfolio Credentials

- Wins in the last 12 months
  - Australian Immigration (5 yr framework contract)
  - Australian Law Enforcement Agency (5 yr framework contract)
  - New Zealand Gold Card
  - Canada Immigration CIC
  - Canada Port of Halifax
  - Philippines ID card Pilot
  - ING Bank in NL, for access control

Malaysia "MyKad"

- Government Multiple Purpose Card
  - MyKad
    - "My" for personal ownership
    - "Kad" Malaysian translation for card
  - Drivers' licenses
  - Identification card for bill payment
    - ePurse:
      - Tolls, parking/public transportation
      - ATM banking
  - Health Services
    - Allergies, medications, medical history, etc. – ensures immediate medical attention during emergencies
  - Immigration checkpoints
  - 20M cards issued to citizens over the age of 12 since 1999

South Africa HANIS

- Home Affairs National Identification System
  - Central registry of all citizens and permanent residents
    - Used to combat fraud in healthcare, welfare, credit cards, and checks
    - Uses a reliable biometrics-based identification and verification system with a smart card
  - Unisys developed, built, implemented, and integrated subsystems
    - Capture: Automated Fingerprint Identification System
    - Card Management System
    - Interface to existing central registry
  - 43M citizens and residents
    - 70,000 applications a day

Access Control – Logical and Physical

Business Drivers
Security Challenges in Changing World

- Increase in crime and terrorism against government, academia, industry and religious facilities and personnel

- Increase in regulatory requirements

- Increase in cost of security personnel and technical solutions

- Need to balance security with operational efficiency and individual's right to privacy

<u>EFFECT</u>

Compelling need to develop efficient processes and solutions that balance security, service, and privacy at a reasonable cost with an acceptable level of risk.

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Unisys VITAL – Quick Overview

What is VITAL all about?

VITAL is the Unisys end-to-end approach to physical security for our global customers. Provides a flexible framework of standards-based components from industry leading partners focused on the areas of:

- **V**ideo surveillance;
- **I**dentification and
- **T**racking of personnel and objects;
- **A**ccess control;
- **L**ocation monitoring globally.
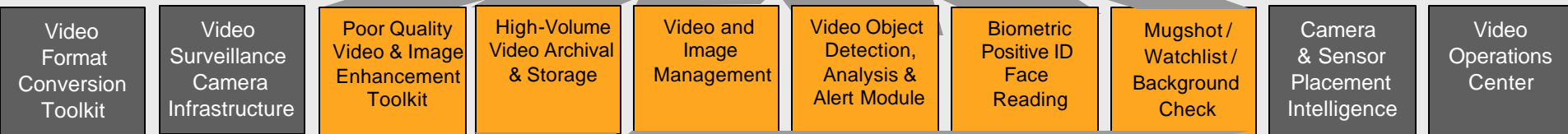
Example

Face Matching Solutions for Law Enforcement

Customer-Specific Deployments

Australian LE Organization	SBINet with Boeing	US Metropolitan LE Organization	City of Philadelphia	Minneapolis Safe Zone

Re-useable Solutions

Border Control Enabled by Video	Positive Traveler ID With Facial Recognition	Mugshot Database Matching	Access Control enabled by Video	People - Positive Identification in Crowds	People and Asset Location & Tracking Enabled With Video

Capability Building Blocks

Video Format Conversion Toolkit	Video Surveillance Camera Infrastructure	Poor Quality Video & Image Enhancement Toolkit	High-Volume Video Archival & Storage	Video and Image Management	Video Object Detection, Analysis & Alert Module	Biometric Positive ID Face Reading	Mugshot / Watchlist / Background Check	Camera & Sensor Placement Intelligence	Video Operations Center

Alliance/Technology Components

|					Photo Shop	Cyber Extruder	L-1	Oracle	Cognitec											

Commonwealth Example

Distributed Applications:
Simplified Conceptual Topology

➢ Environments often use other products that have their own method of authenticating

➢ Users often defined in many places, have many passwords, and many administrators need to be involved

➢ The problem becomes more complex with each new application and additional environment
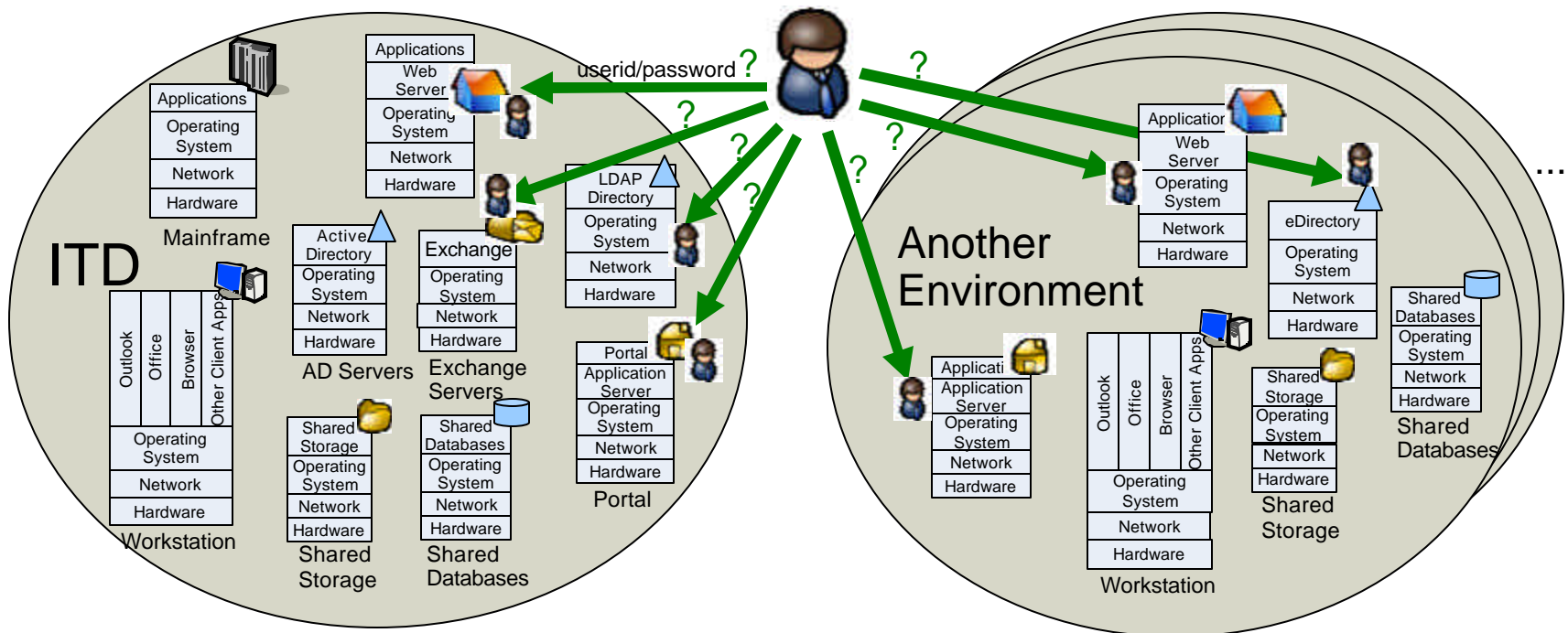
Simplified Conceptual Topology - SEIM Future Vision
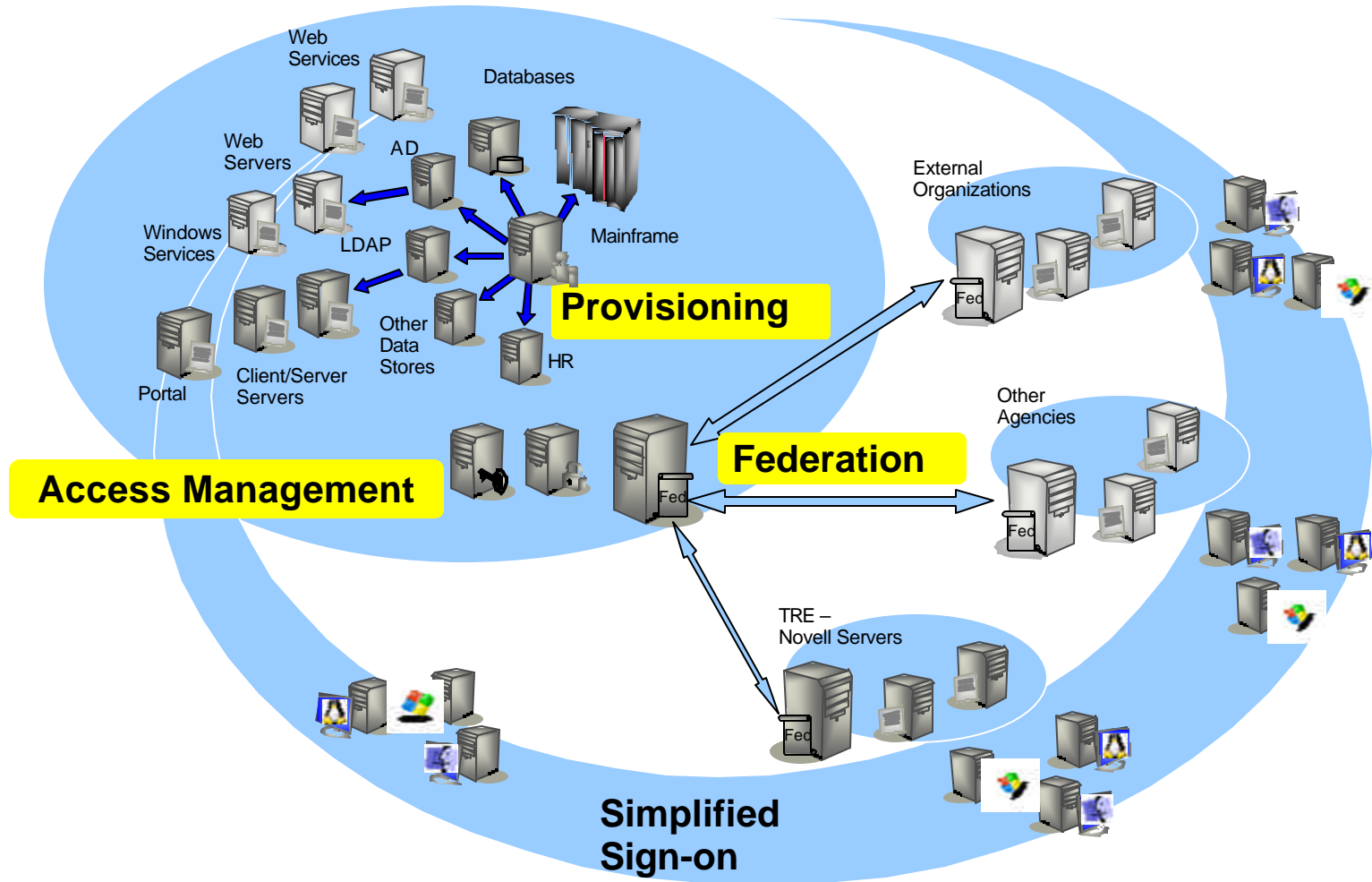
Trusted Enterprise

Trusted Enterprise

- **Trust** and **security** are not the same.

- Increase **trust** in relationship ➔ organizational integrity

- Essential characteristics of a trusted enterprise:
  - **Trusted Enterprise Framework** established by Unisys Security Leadership Institute
  - Seven broad characteristics for Trustworthiness
  - Impact an organization's **reputation** for trustworthiness.
  - Thirty supporting attributes that relate directly to the perceptions about organizations with which they have a **relationship**.

1. **Innovative**
2. **Risk Averse**
3. **Dependable**
4. **Predictable**
5. **Ethical**
6. **Strategic**
7. **Economic Prudence**

What Is Trust?

- Trust means different things to different people.
  - Who are you and how do I know?
  - What can you have of mine?

- Each relationship is implicitly governed by Trust
  - Rules of engagement, collaboration, and conclusion.
  - Security Technology cannot develop the rules.

- Security alone cannot provide a solution; it is a TOOL for Trust.
  - Used correctly, security enhances Trust
  - Used incorrectly, security erodes Trust
  - Not used at all, Trust is removed and unmanaged

Trusted Enterprise

- **What is a trusted enterprise?** It is an organization that embraces a unifying set of values that guide and shape the organization's strategy, core operations and culture.

- A trusted enterprise successfully manages people, processes and technologies across the organization in ways that are visible and transparent. A trusted enterprise is an ethical company that treats its stakeholder with respect and integrity.

- Our framework defines 7 broad characteristics for trust and 30 supporting attributes that relate directly to the public's perceptions about organizations with which they have a relationship.

Q & A

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