

Regionalization: Opportunity for Healthcare to invest in Information Security

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Agenda

- Healthcare Regionalization:
 - Canadian Perspective
 - Security Challenges and Opportunities
- Regional Risk Management
 - C.I.A.
 - Regional Governance
 - Control Framework
- Case Study: Implementing a Regional Security Program
- Network Admission Control (NAC)
- Case Study: NAC
- Summary



Healthcare Regionalization: Business Benefits

- Simplified funding and administration
- Common strategy for spending
- Sharing of information (electronic patient record, data imaging)
- Better allocation of resources, reduce duplication of services
- Efficiencies of Scale



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Healthcare Regionalization: National Perspective

	# Health Authorities	Health Authorities by Bed Count			
		<100	100-199	200-399	400+
AB	9	0	1	4	4
BC	6	0	1	0	5
MB	11	3	2	5	1
NB	8	0	2	3	3
NL	4	1	0	2	1
NT	8	8	0	0	0
NS	9	1	6	0	2
NV	1	1	0	0	0
ON	14	0	0	0	14
PE	1	0	0	0	1
QC	18	3	0	2	13
SK	13	4	6	1	2
YK	1	1	0	0	0
Canada	103	22	18	17	46
		21%	17%	17%	45%



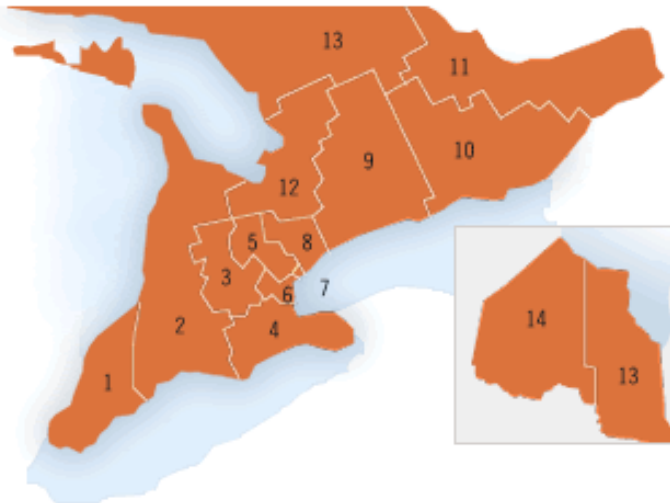
eHealth in Canada - building momentum - Branham Group Inc, 2007

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Healthcare Regionalization: Ontario Perspective

- Official LHINs defined across the province
- “unofficially” partnerships pre-date LHIN boundaries
- Early efforts concentrating on IT transformation and cost savings
- Wide gap in scale/capabilities from across LHNs



LHIN	Region	Hospitals	LTC Facilities	Acute Care Beds
1	Erie St. Clair	5	38	1,238
2	South West	16	84	3,457
3	Waterloo Wellington	8	34	1,488
4	Hamilton/Niagara	12	89	3,410
5	Central West	2	23	823
6	Mississauga/Halton	3	25	1,364
7	Toronto Central	16	39	6,509
8	Central	11	41	2,118
9	Central East	10	69	2,500
10	South East	8	35	1,219
11	Champlain	19	61	3,277
12	North Simcoe	7	25	1,132
13	North East	25	41	1,846
14	North West	13	14	1,022
	No affiliation	1		58
	Total	156	618	31,181

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Healthcare Regionalization: Challenges

- Building Trust
 - “Healthcare to Healthcare” Trust
 - Patient and Stakeholder Trust
- Linking together disparate systems and technologies
- Making Security and Privacy an enabler
- Security as an IT function
- Placing a value on our health care data



Healthcare Regionalization: Opportunities

- Build Trust regionally via common governance and sound risk management program
- Looking at technology with a wider view
- Efficiencies of scale
- Larger common investment into larger systems:
 - Authentication, Authorization, Reduced Sign-on
 - Secure Log Management and Monitoring
 - Security Information and Event Management
 - Secure Connectivity



Healthcare Regionalization: Hospital IT Utilization

% of hospitals in province with a deployed reduced sign-on infrastructure:

BC – 28%	AB – 30%
SK – 0	MB – 4%
ON – 12%	QC – 14%
NB – 42%	NL – 0
NS - 0	

Canada wide - 12%

We are just getting started with security technologies!

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Regional Risk Management: Industry Trends & Tools

- Risk Management governance model
 - Federated Risk Management
- Formalizing expectations & Accreditations
 - ISO 27799, 27001, 27002, 17799
 - PIPEDA, PHIPA, HIPAA
 - IHE, CHI PSA
- Focus on People and Processes as well as Technology
- Building of an Information Security Framework

ISO 27799 information can be found at <http://www.27000.org/iso-27799.htm>

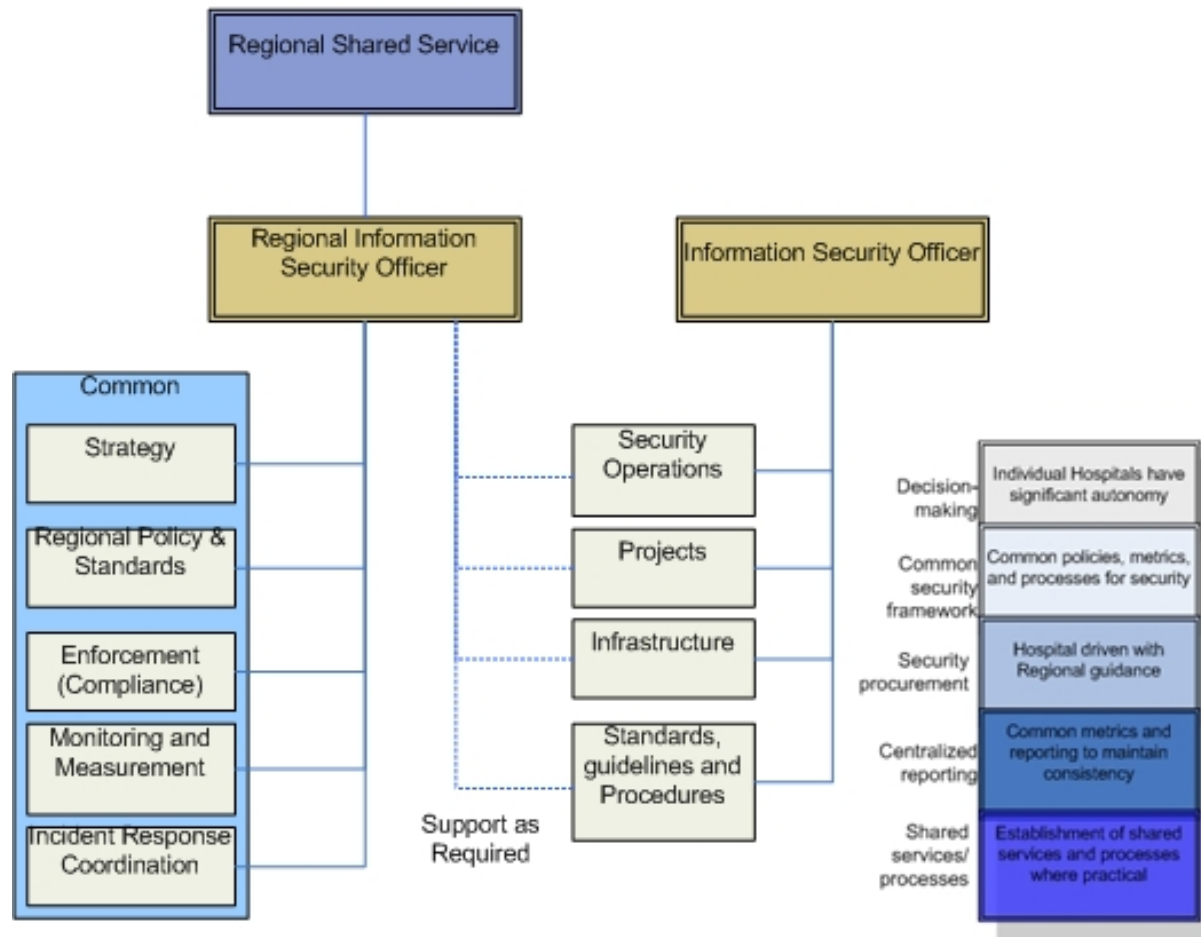


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Regional Risk Management: Federated Healthcare Governance Model

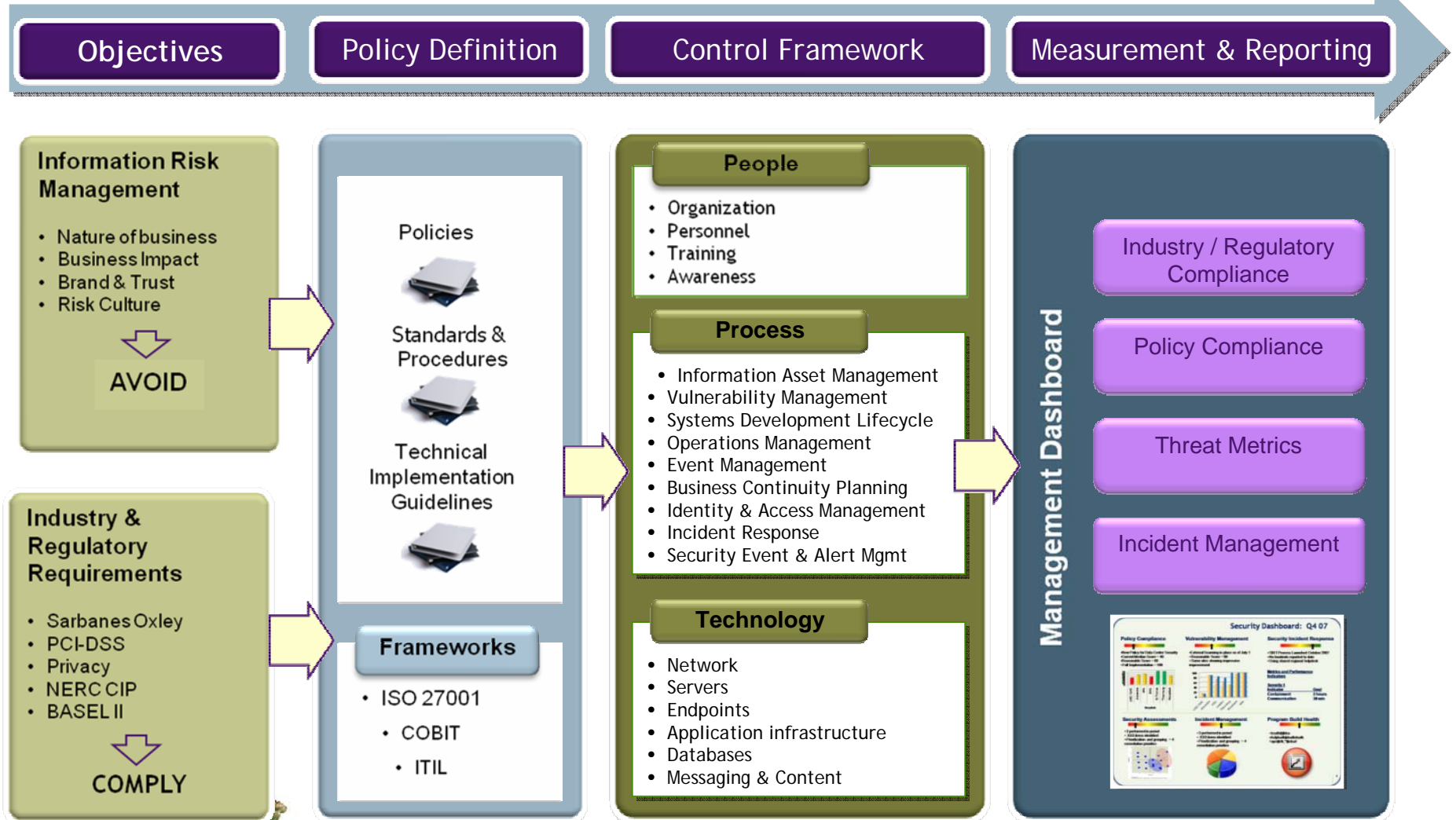
Federated Information Risk Management Organization



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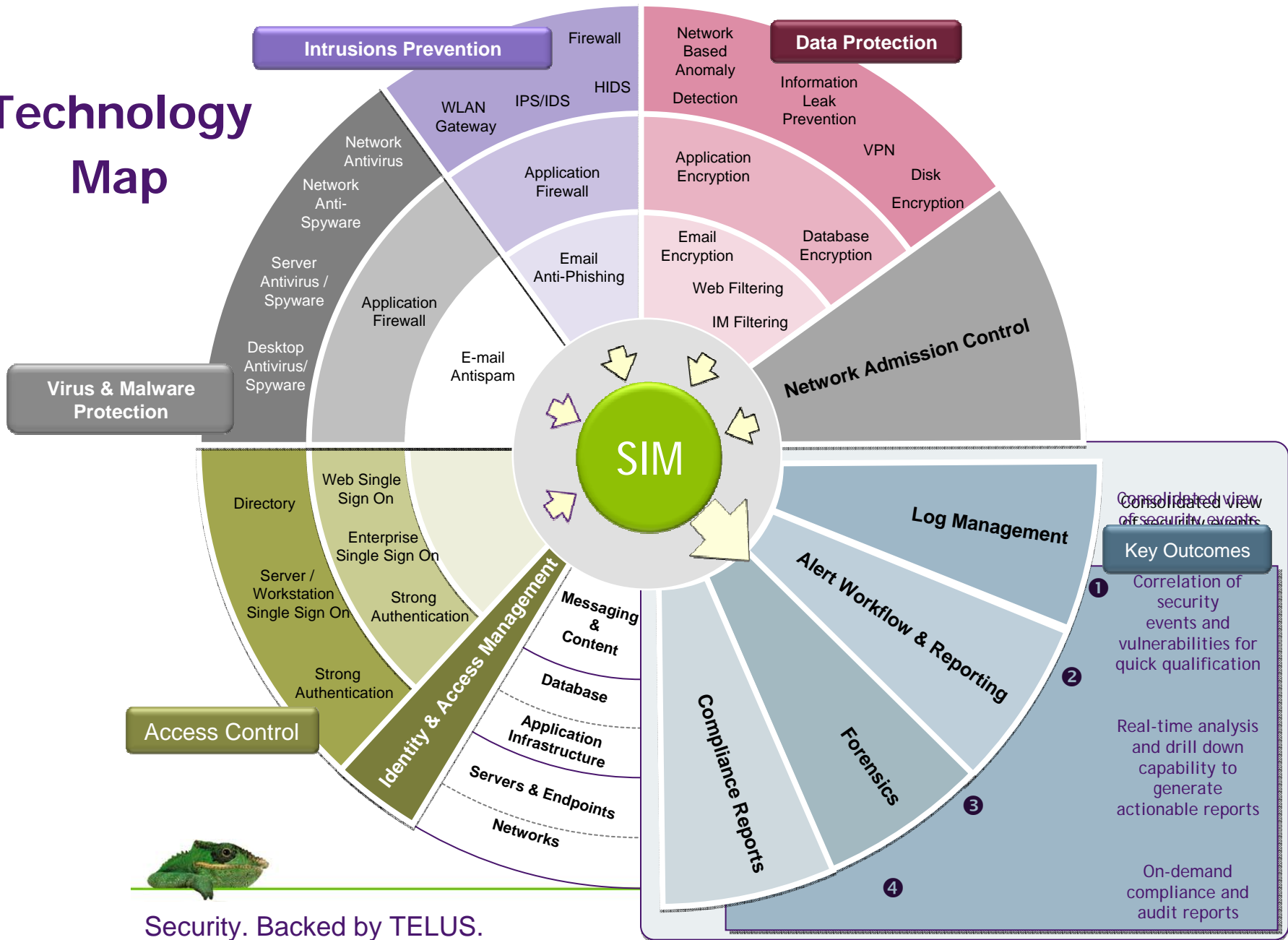
Enterprise Security Framework



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Technology Map



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Case Study

Nine hospitals in Ontario

■ Four Phase Project

- Phase 1 – ISO17799/27799 assessment
- Phase 2 – Define Strategy and Project Plan
- Phase 3 – Build
- Phase 4 – Transfer and Sustainment



Case Study

- Federated Risk Management
 - Regional Information Security Office
 - Regional technical support for security
 - Common policies and standards
- Regional center of excellence
 - Threat Intelligence
 - Vulnerability Scanning
 - Patch Management / Testing
 - Centralized shared services
- Regional threat and risk assessment requirements and processes



Network Admission Control (NAC)

- Ability to Enforce and Audit security policy and control framework to ensure that it maps to:
 - Business needs
 - Regulatory requirements of your organization



NAC Helps Mitigate Risks

- Ensures end-points on the LAN are compliant with your corporate security policies
 - AV up to date?
 - MS Patches?
 - Is software there that shouldn't be?
- Controls access to network resources
 - Segment the user population
 - Finance
 - Doctors
 - Nurses
 - Guests
- Enables Restricted Guest Access – While Mitigating Threats
 - Mobile and Remote users
 - Contractors / Partners / Vendors
 - Clients and other guests



Prevention Versus Treatment

Vaccination (NAC)



- Connecting your business to the internet is like a virus going airborne
- NAC framework => immunization / disease control process
- Applies to all users - everyone needs to wear a mask
- Isolate non-compliance and remediate - people with symptoms quarantined and treated / immunized
- Prevent an attack from happening



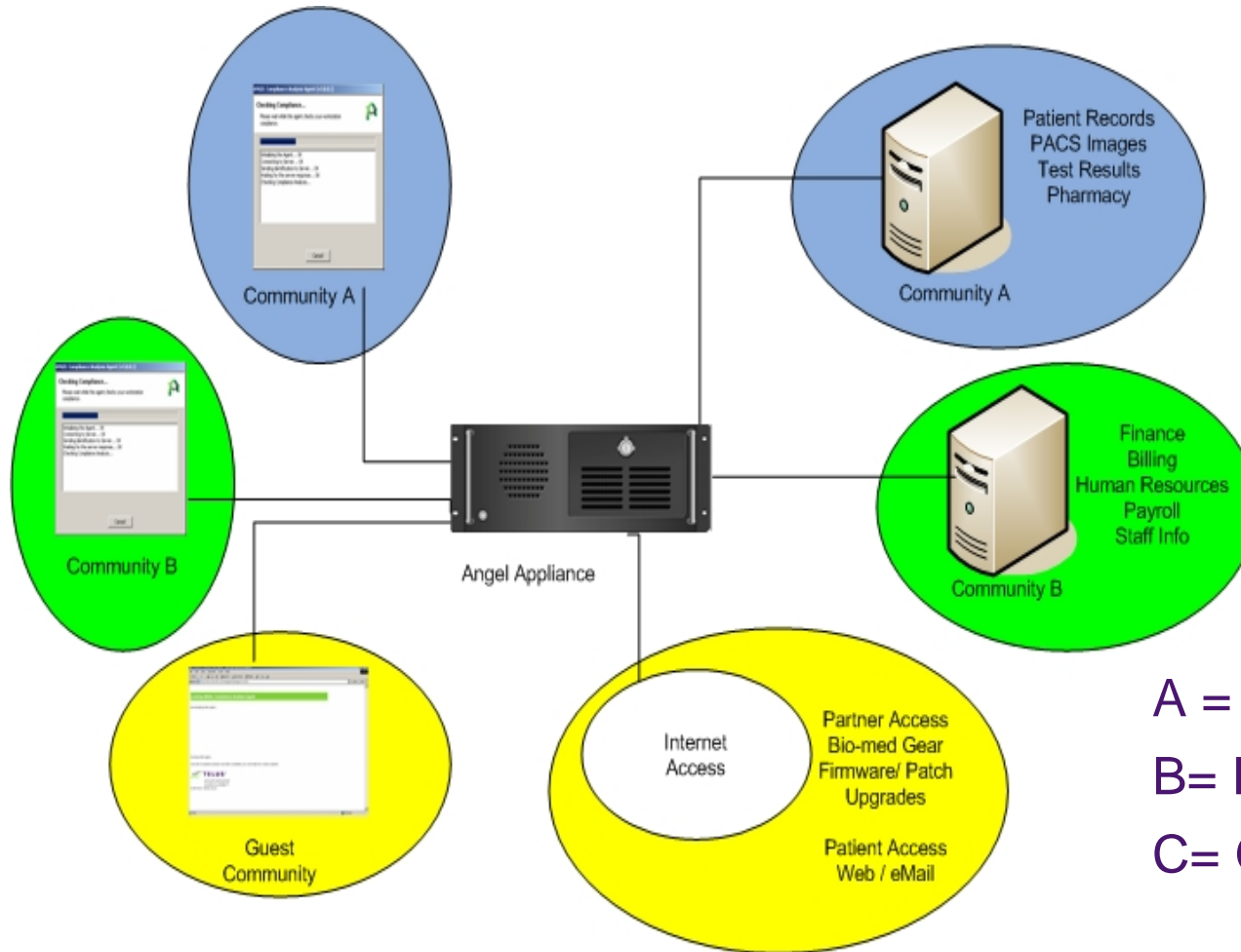
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Medicine (Firewalls, IPS, IDS ...)



- Security medicine important but should reduce dependence
- If Viruses, worm or spyware enter your network – you are in “Re-act mode” and may not fully recover
- Reduced dependency = healthier business systems, healthier finances (less risk, less unplanned spend)

Case Study: Segregate User Population



A = Doctors and Nurses

B= Finance / HR

C= Guests / Contractors



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Case Study: Real Time Healthcare Benefits

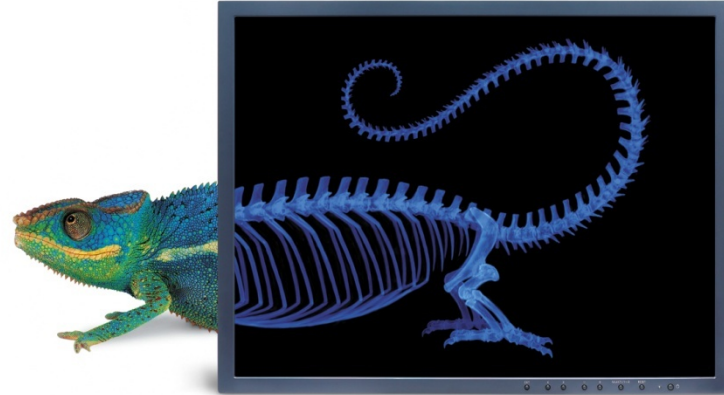
- Doctors can access patient data from their office or from any hospital – regardless of differing infrastructures
- Patient Records are viewable only by those in the right role
- Visitors get access to Internet, while Healthcare network remains separate and secure
- Policies and Procedures can be audited – and therefore improved



Summary

- Innovation and E-Health is the future if we want to provide healthcare cost-effectively
- Security and Privacy must be an enabler to make this a success
- To do security and privacy right, healthcare providers need economies of scale
- Healthcare security is not a technology solution, you start with people and processes





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