



#FrictionlessHealth

## Enabling Interoperability in Legacy Healthcare Systems

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**Robi Karp**

CEO

*Fluffy Spider Technologies*

I have a chronic health condition &  
I want a better way to  
manage it





## Overview

- Legacy Systems
  - Understanding problems & impact
  - Challenges in upgrading
- Why interoperability
- Technical interoperability
  - Starting with integration
  - The 3 ties of technical interoperability
- Making my GP interoperable
- What could be next

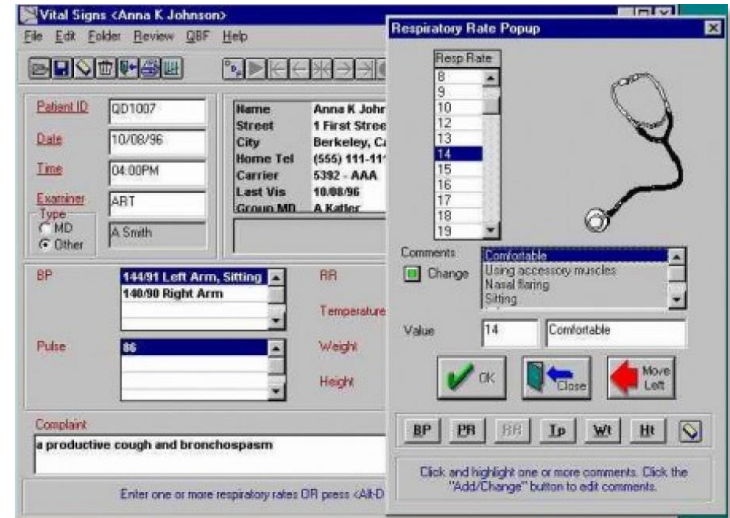




## Understanding Legacy Systems

A legacy system is:

- No longer supported
- Too hard to upgrade
- Too expensive to support
- New features can't be added



It is still in the workflow because it is performing a critical function



## Impact of Legacy Systems

- ✗ Affects health
- ✗ Costs dollars
- ✗ Leads to errors
- ✗ Costs market share
- ✗ Reduces competitiveness



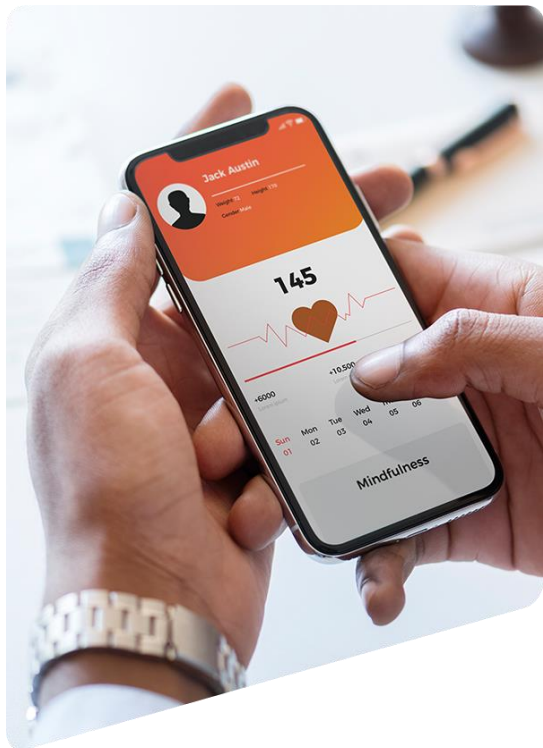




## Challenges in Upgrading

- Healthcare delivery involves technology
- The technical challenges are complex
- Need a migration strategy
- Not everything will be upgraded at once
- Partnerships will be important
- Who is paying for this?





## Why Interoperability?

The healthcare consumer:

- Invested in their health
- Active participants in their healthcare
- Make informed healthcare decisions
- Improved health literacy
- Continuity of care
- Care in different settings; home, hospital, clinic



## Why Interoperability?

The healthcare provider:

- Cost reduction
- Less risk of error
- We cannot innovate if we do not have interoperability
- The more we standardise, the more we can innovate at speed

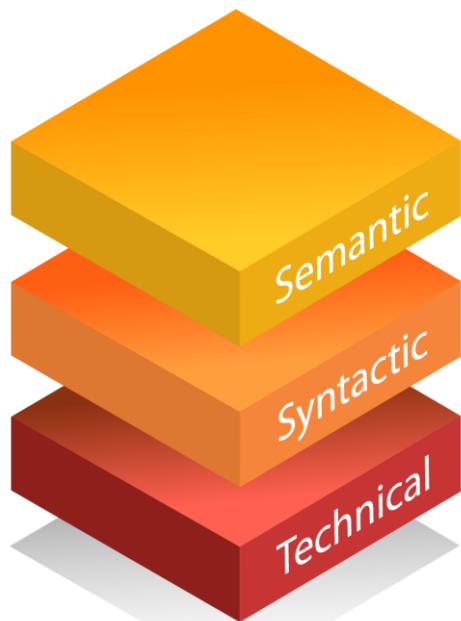




## Integrating Legacy Systems



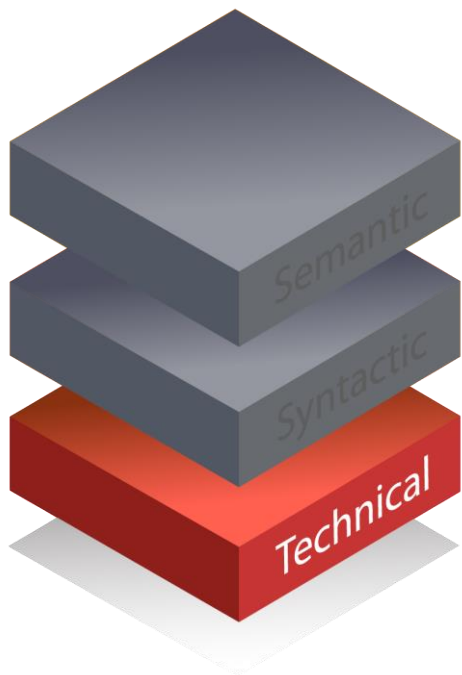
- Two systems exchanging information
- Custom solutions with proprietary knowledge
- Clunky methods of data access
- Not scalable



## What Does It Take To Be Interoperable?

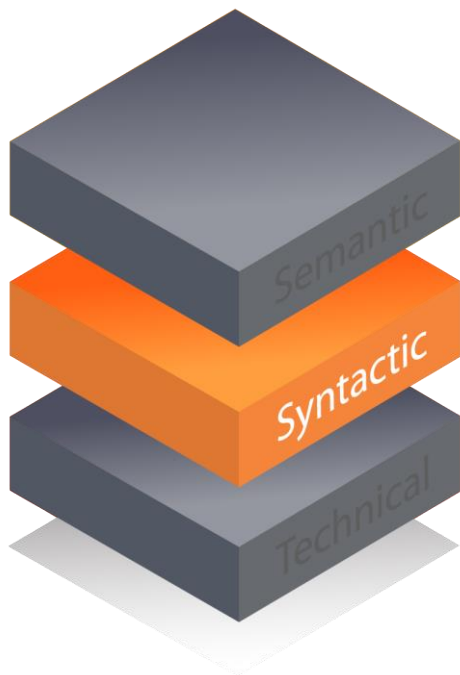
The ability for different information technology systems and software applications to communicate, exchange data, and use the information that has been exchanged.

Source: HIMSS



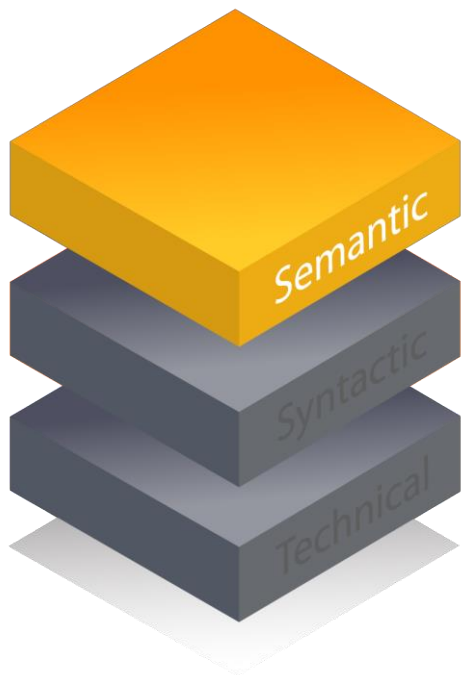
## Technical or Foundational Interoperability

- Transmit information from one system to another
- Simple communication
- No capacity to interpret received information
- Workflow will involve manual processes
- Most legacy systems in Australia support this



## Syntactic or Structural Interoperability

- Systems can exchange & interpret information
- Structure & format of information is defined
- Health information exchange standards - FHIR & HL7
- Standard JSON, XML or HTML via REST API's
- Interoperability engine like InterSystems IRIS
- Legacy systems will need custom solution



## Semantic Interoperability

- This is the ideal goal of interoperability
- Systems can exchange, interpret & act on information
- Comprehension of information exchanged
- Codification on top of data standardisation
- Legacy systems will need custom integration solution
- Coding via terminology server like CSIRO's Ontoserver





## Semantic Interoperability

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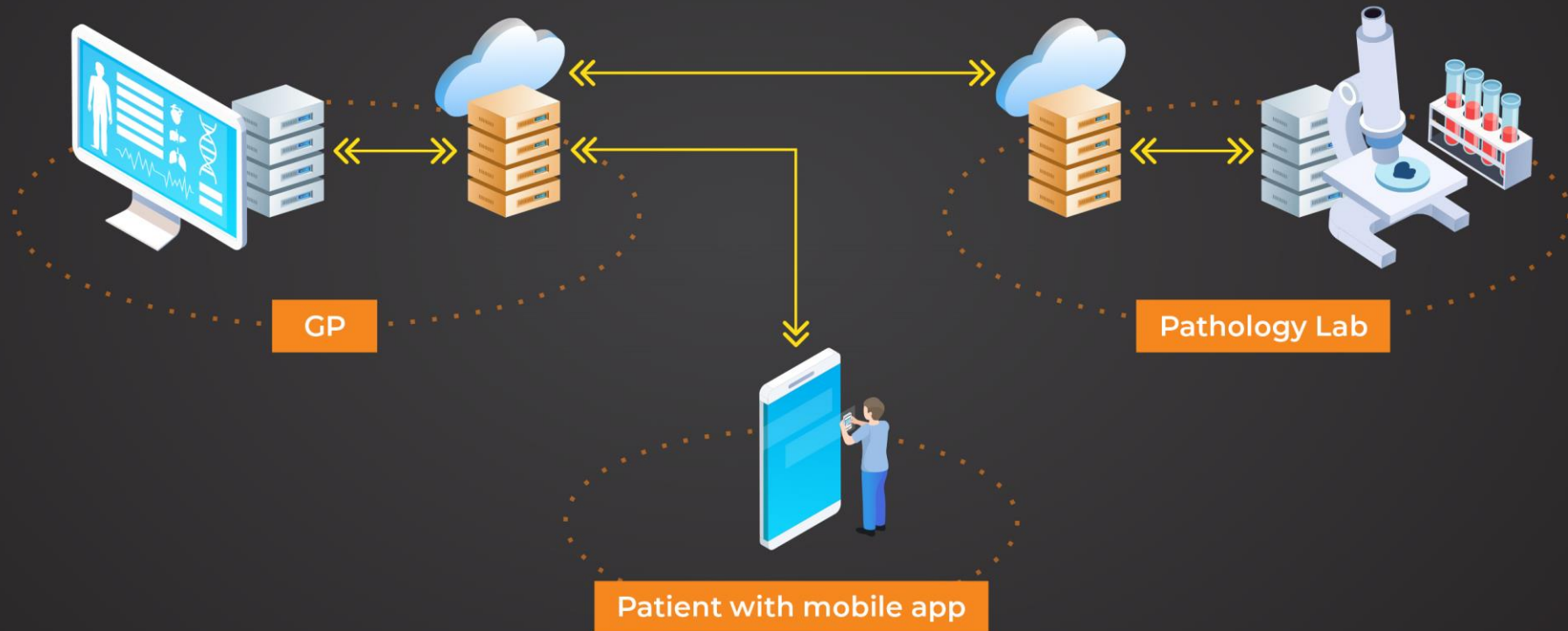
```

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    ]
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```

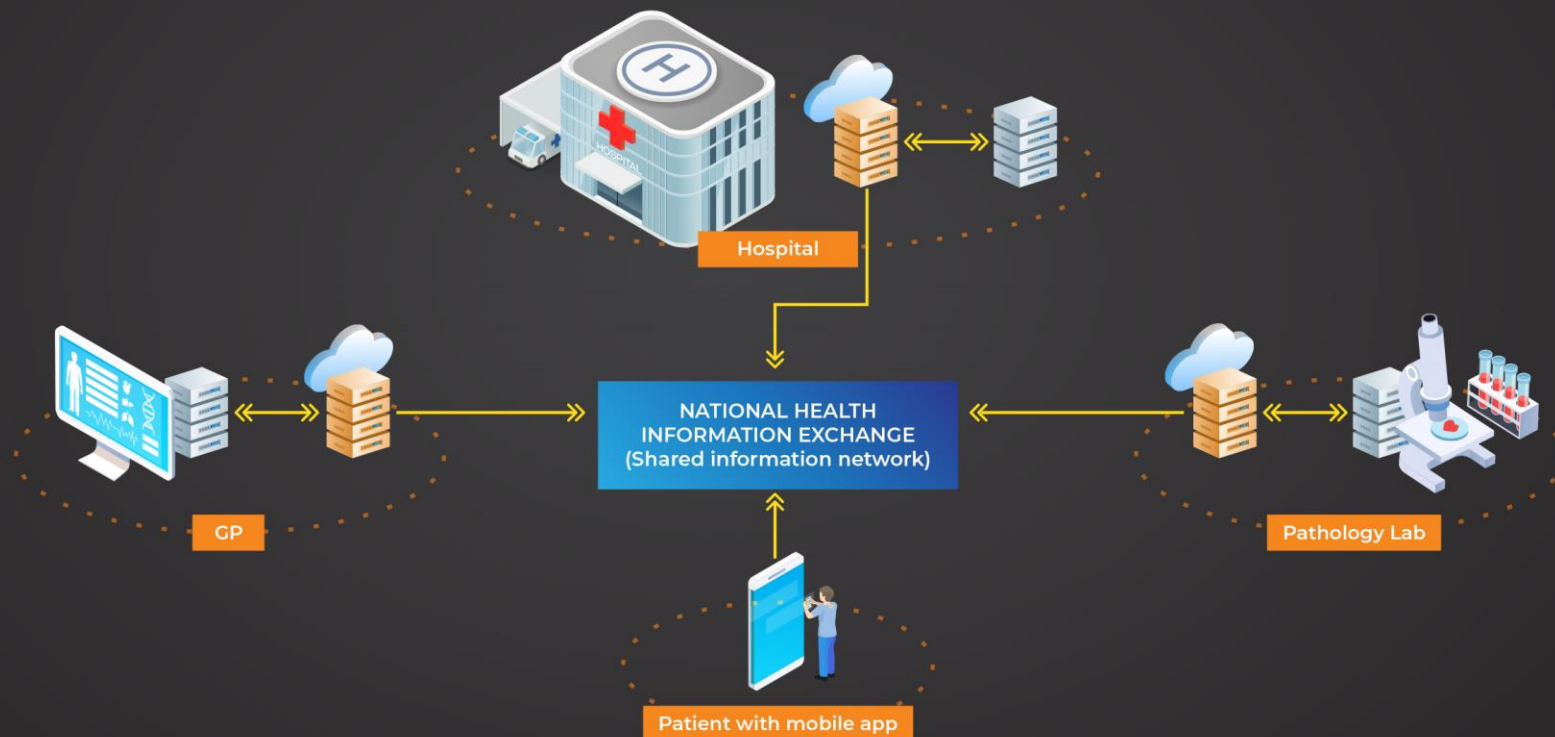
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# Thank you

Robi Karp

CEO

[fluffyspider.com](https://fluffyspider.com)

[robi@fluffyspider.com](mailto:robi@fluffyspider.com)



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