# Our Approach to a Revenue-Cost Model for a Nationwide Health Information Network

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This presentation discusses a NHIN Architecture Prototype project made possible by a contract from the Office of the National Coordinator for Health Information Technology (ONC), DHHS. The content is solely the responsibility of the authors and does not necessarily represent the official view of ONC.

NHIN Infrastructure Scope
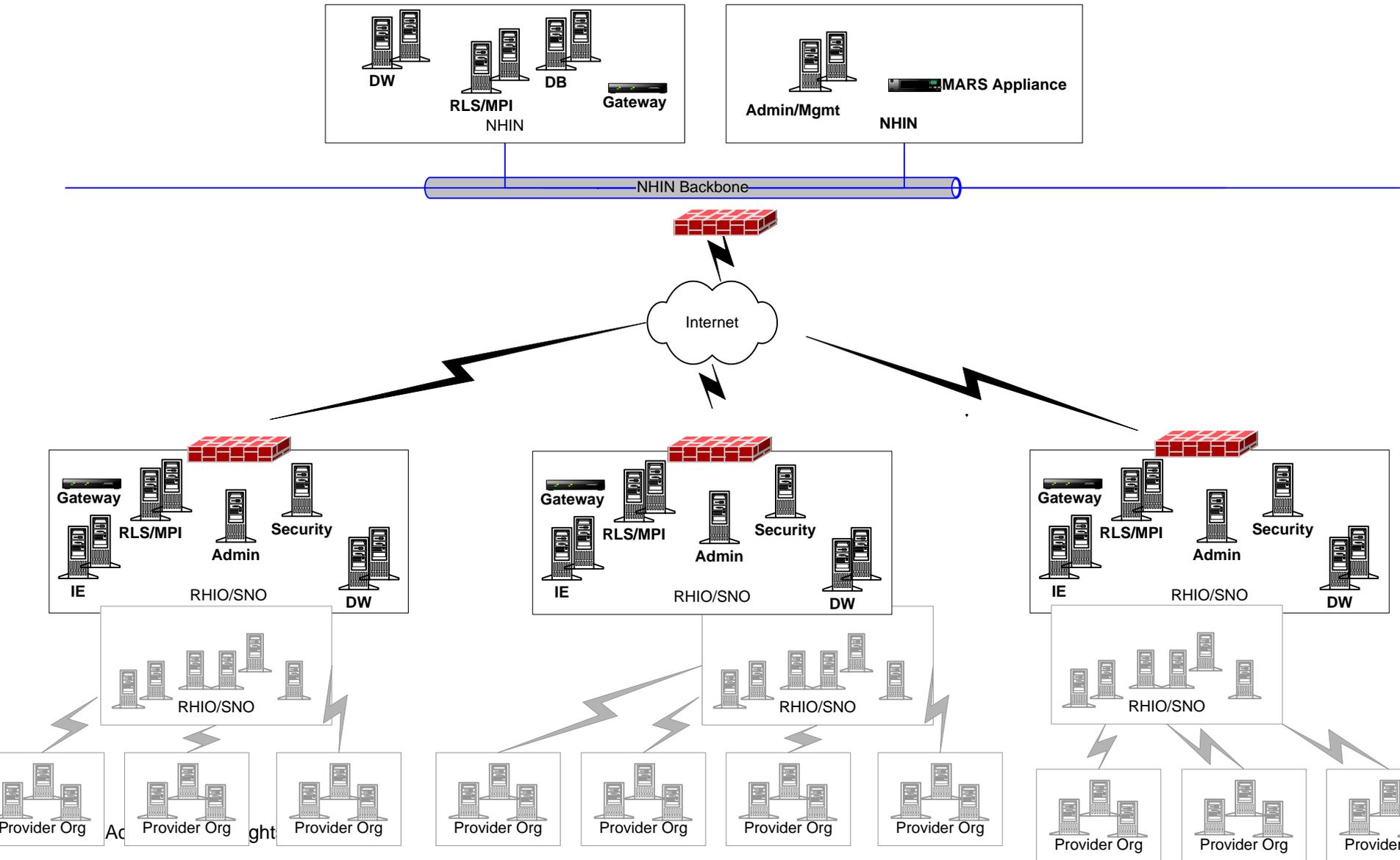
Key Assumptions

- That there will be widespread adoption of electronic medical record systems, so that health care data is captured in electronic form.

- That data and messaging standards will be widely accepted by SNOs who will use the NHIN.

- That the legal and political framework will permit anonymized data to be exchanged via the NHIN for secondary use.

Core NHIN Services

Core Infrastructure			
Common IT Component	Authorization	Authentication	Encryption
	Message Routing	Message Auditing	System Monitoring / Surveillance
NHIN-Specific Core	Master Person Index		Record Locator
Business Core Services	Terminology Translation		Data Normalization

These services, where not already implemented at the SNO level, must be assumed to fall within the NHIN implementation costs, if RHIOs/SNOs are to avoid a disincentive to connect

Value-Add Services

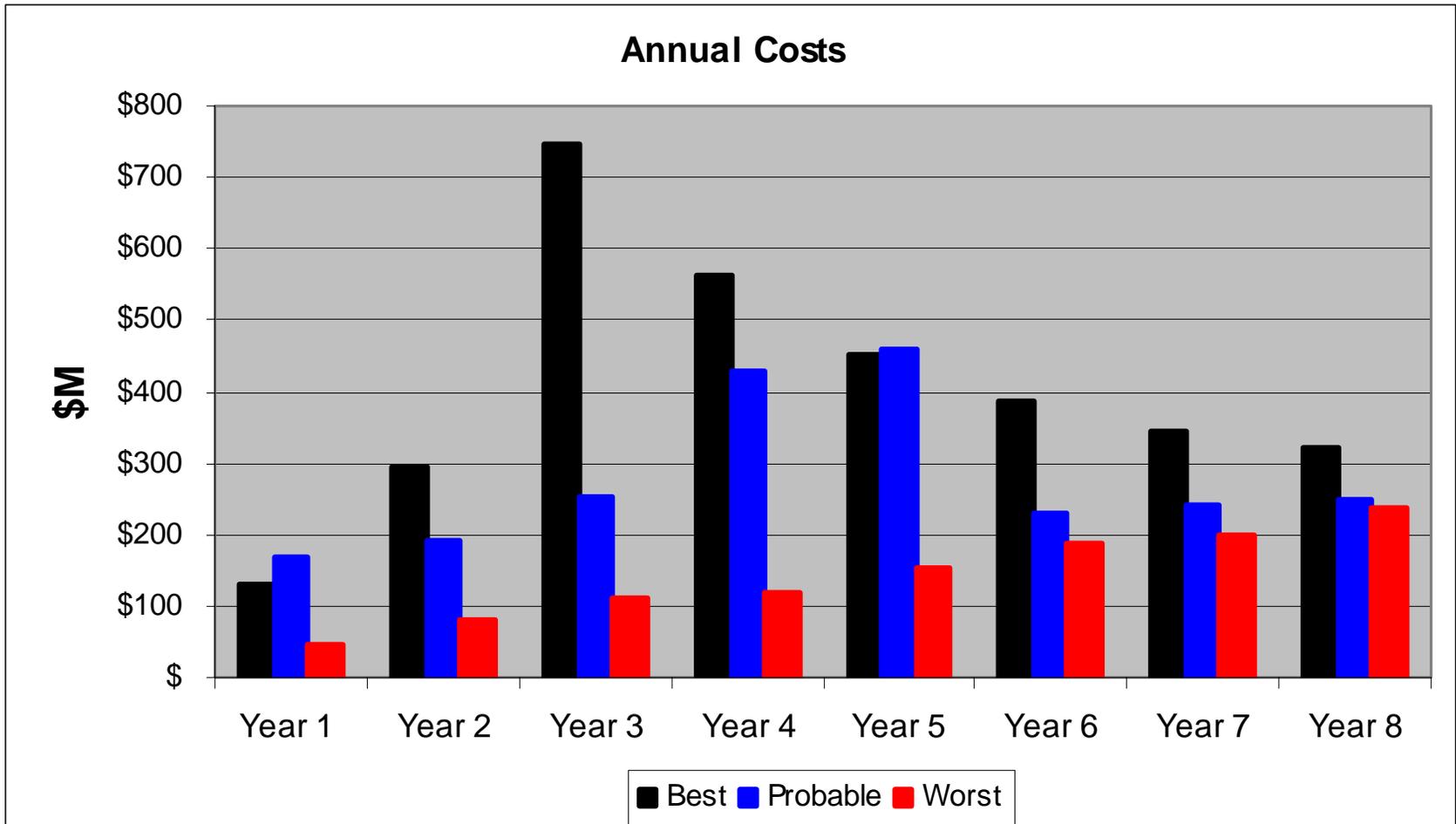Revenue generation for the NHIN itself is based on the following services:

- Data Mining/Knowledge Discovery
  - Biosurveillance
  - Care Management
  - Research
- Data Routing
- Clinical Trials
  - Recruitment
  - Data Collection
- Eligibility, Referrals, Claims Management
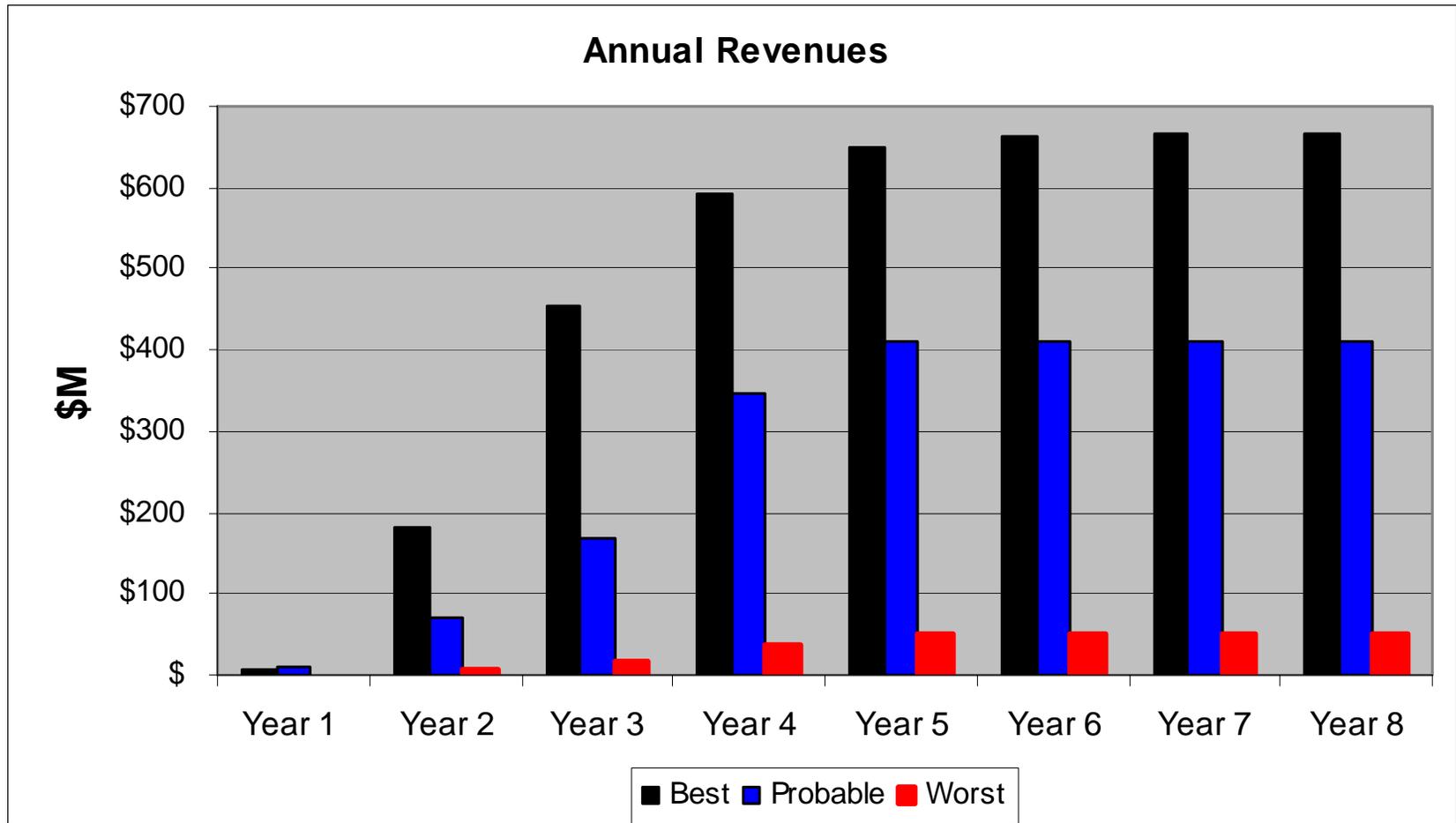
Scenario Descriptions

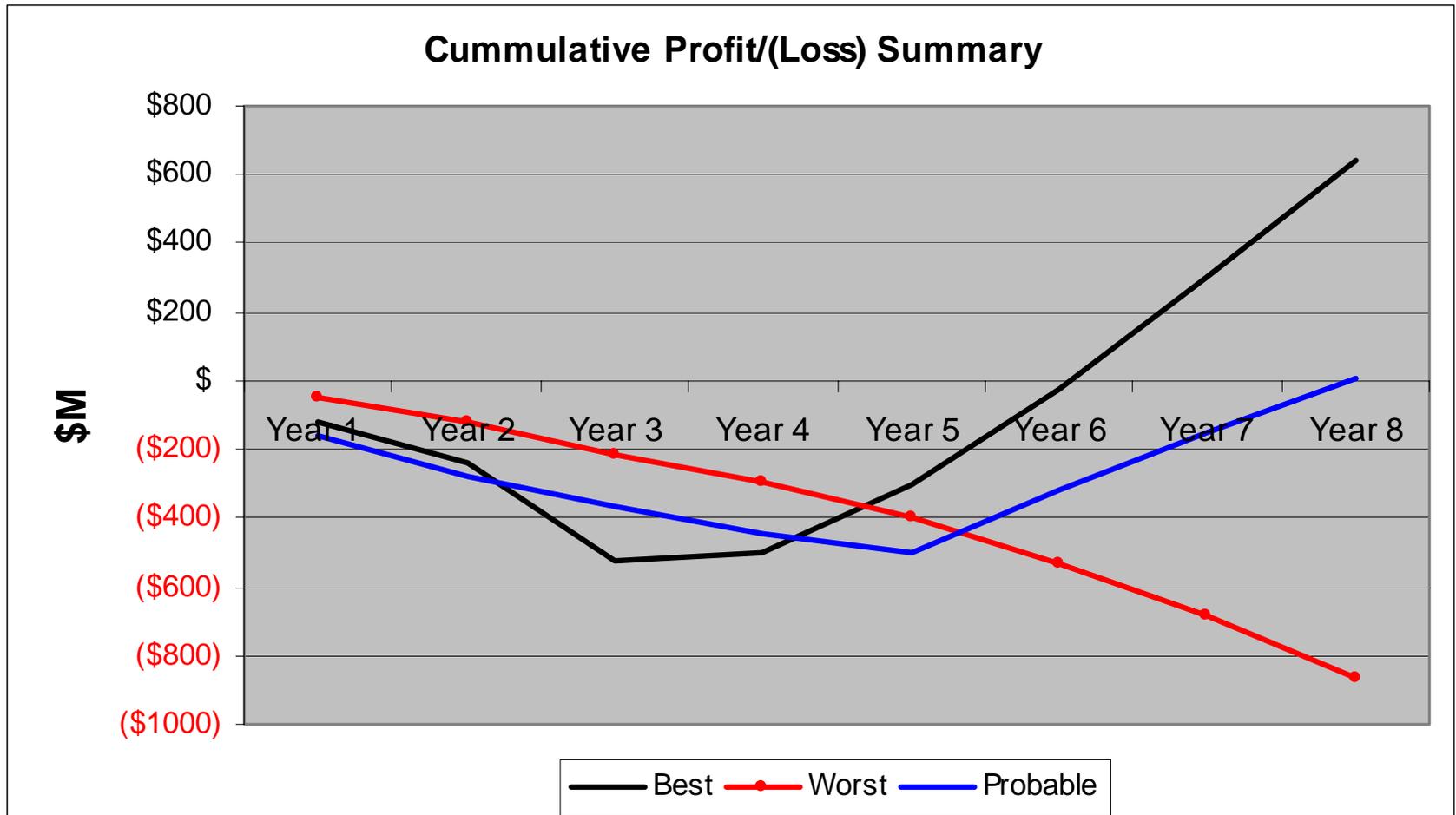|	Best	Probable	Worst
Setting	150 RHIOs/SNOs Established	80% of RHIOs/SNOs are established	25% of RHIO's/SNO's established
RHIO	100% Connected	50% connected by 2014	25% connected by 2014
Consumer Demand	High, Plateau in year 6	Moderately High, Plateau after year 5	Moderate, plateau after year 4
Demand Timing	Immediate	Slight lag after market is created	0% year 1, 25% in year 2, 50% in yr 3, 75% in year 4
Data Breadth	100% of national data available	75% national data available	20% of national data available
Costs	High level of standardization at the RHIO/SNO level. Increases in productivity reduce costs by 5% over time.	Moderate level of standardization at the RHIO/SNO level. Moderate cost to the NHIN model Increases in productivity reduce cost by 2½% Moderate reduction in cost of physical infrastructure	Little standardization implemented at SNO level. Productivity constant over time Cost of physical infrastructure unchanged

Cost Scenarios

Annual Costs

A grouped bar chart plotting $M (y-axis, $0 to $800) against Year 1 through Year 8 (x-axis), with three series: Best (black), Probable (blue), Worst (red).

NHIN Revenue Scenarios

Annual Revenues

Profit-Loss Projections

Cummulative Profit/(Loss) Summary

Legend: Best, Worst, Probable

Findings

- Under the Most Probable scenario, the NHIN itself will become financially viable in its eighth year of operations but is essentially a break-even business case over the eight year period

- Lower initial implementation costs do not necessarily predict sustainability

- The business case for the NHIN itself is likely to be highly sensitive to the appetite for data by secondary users

- Selection of SNOs for initial connection to the NHIN will be a major driver of NHIN success.

- The profitability of the NHIN itself is greatly improved if the SNOs that it connect to it are mature and can transmit high volumes of standardized data