ROI and HIPAA

Planning for and evaluating the financial results of investment

Rick Taylor

Agenda

- **The outstanding opportunity: using IT to create value**

- The problems of proving ROI

- The way to measure AND realize the returns

- The HIPAA gold mine

The demand for improvement

<u>Situation</u>: the demand for healthcare is accelerating

Americans now invest annually $1.1 trillion, or 13.5% of the nation's gross domestic product (GDP) in the health care sector. This figure will grow to more than $2 trillion, or 16% of GDP by 2007.

<u>Problem</u>: the quality of healthcare still leaves room for improvement
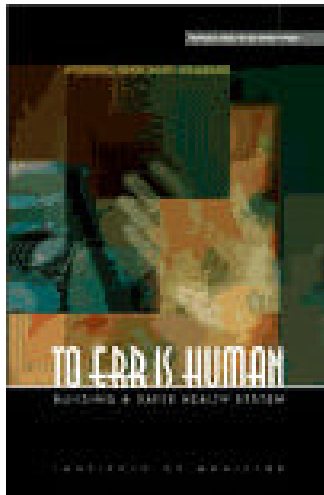
"A highly fragmented delivery system that largely lacks even rudimentary clinical information capabilities, results in poorly designed care processes characterized by unnecessary duplication of services and long waiting times and delays".
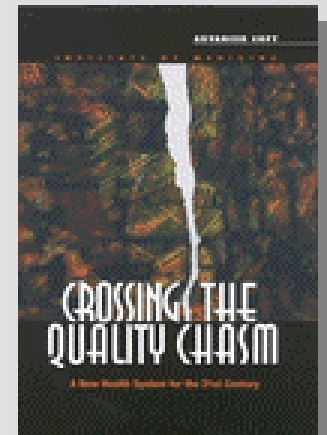
The opportunity to create value using IT

"In the past, value in the healthcare sector was created through investment in physical assets that led to the expansion of hospitals, …in the future, value will be created through greater investment in intangible assets. This will require a redeployment of assets from bricks and mortar to investment in human capital and information technology (knowledge capital)".

Shortell, Stephen: M. Robin Gillies, David Anderson,
Karen Morgan Erickson, John Mitchell: Remaking Health
Care in America. 2000, Jossey-Bass.

……few have taken it

"What is perhaps most disturbing is the absence of real progress towards …. applying advances in information technology to improve administrative and clinical processes".

Crossing the quality chasm: a new health system for the 21st century. Institute of Medicine.
National Academy Press, DC. 2001.

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Borrowing power is limited

The last 20-30 years, may have been the "Golden Age of Capital" for US healthcare, when we have used close to 100% of debt capacity. Systems are at maximum/approaching maximum debt capacity for current/desired rating.

A large percentage of future growth will need to be equity funded, with reduced prospects of significant equity growth.

"Future access to capital will be very limited from traditional sources; Access to capital will determine future winners/losers".

Increasing demand for proof of return

I.T. has been demanding further investment for years saying "We need to keep up with the competition & improve quality."

Y2K fears

Enterprise Resource Planning (ERP) solutions

Web-based solutions

Customer Relationship Management

Supply Chain Management

CEO's and CFO's need evidence of real returns if they are to authorize further investment

'By 1999, hospitals that delay significant CIS investment because of ROI uncertainty will face competitive disadvantages. This will render them unable to compete. However, through 2000 to 2002 most IT shops will be required to conduct CIS ROI cost/benefit studies'.

New tools for quantifying CIS ROI. Meta Group Report 12/18/98

Exaggerated claims = lost credibility

Time saved on Clinical Documentation need not be used to generate cash

It can be used to spend more time on direct patient care, to reduce overtime, to increase throughput or to re-allocate duties amongst staff on Units

"The safest vehicle on the market"

Alerts on ordering meds. do NOT necessarily equal lives saved
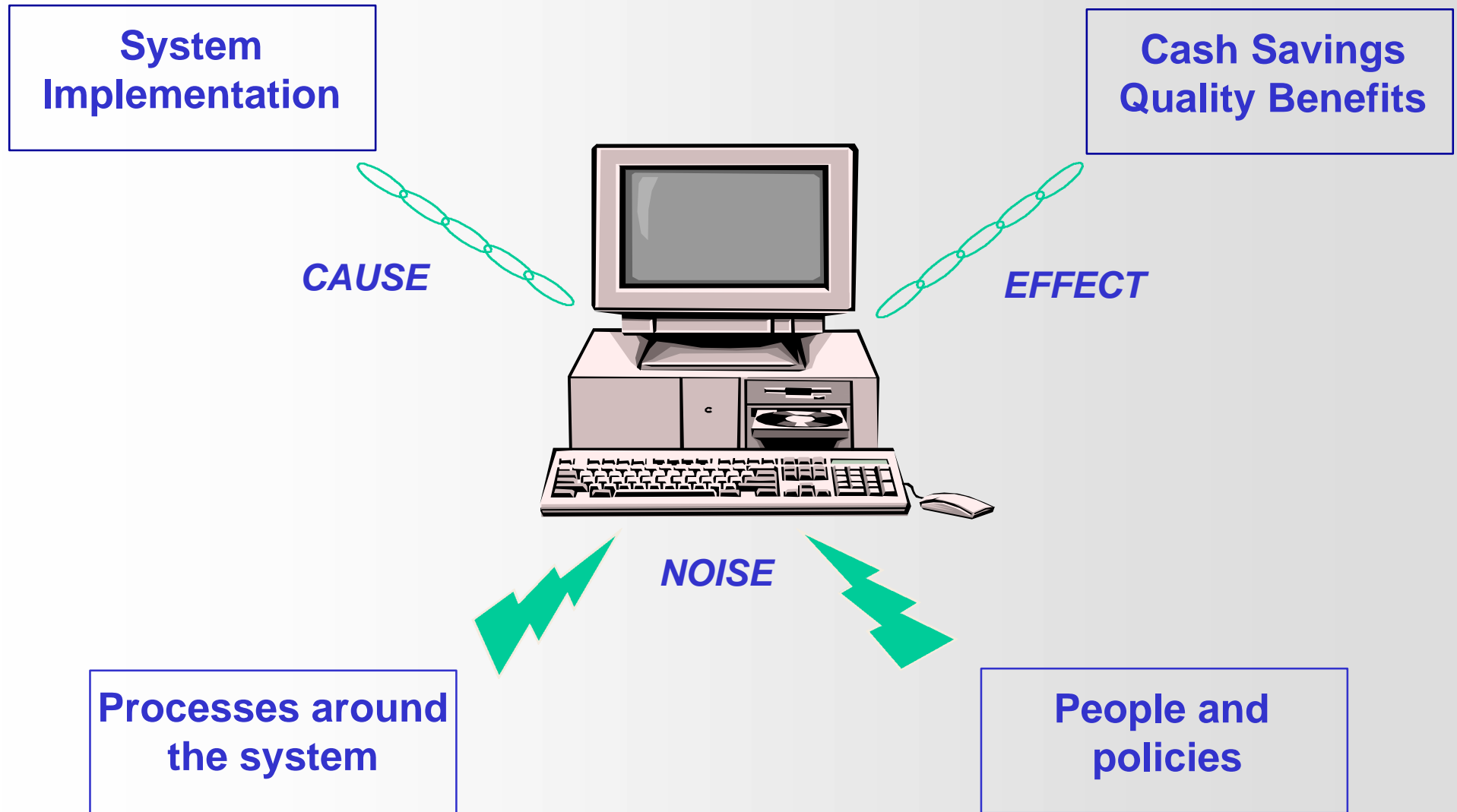
A comprehensive Cultural Change and Process Improvement program is needed to persuade physicians of the benefits of Physician Order Entry

ROI is difficult to prove

System Implementation

Cash Savings Quality Benefits

CAUSE

EFFECT

NOISE

Processes around the system

People and policies

These problems are common to all industries

The estimated ROI is difficult to realize

Fractional FTEs

Tough management decisions
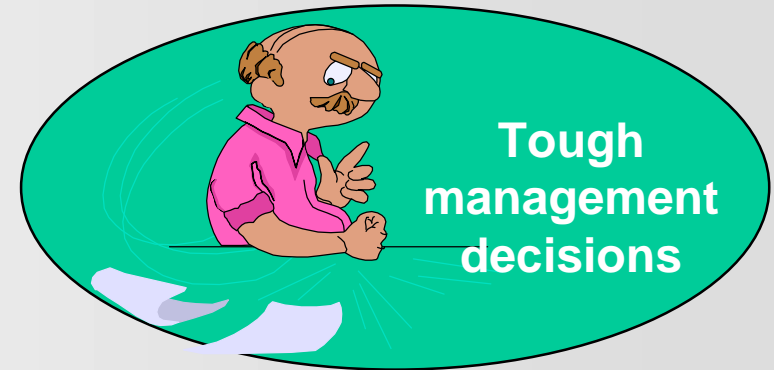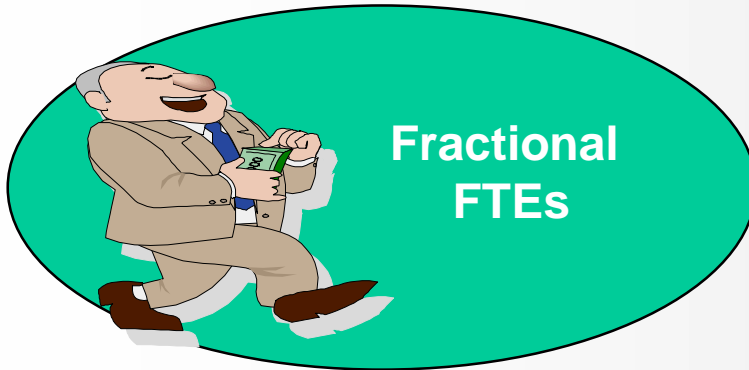
80-90% of major change projects fail to achieve their human and technical objectives on time and within budget

90% of project failures are due to neglecting the human factors of the project

Further investment needed

Resistance to change

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A common starting point

"Our approach is based on the fundamental belief—shared by me and senior executives, including the president—that a company should first decide:

1) **What it is going to do** (its revenue goals, profit goals, strategies, for instance) and then

2) **what business processes it will use to achieve those objectives** (such as how it will interact with its customers)

The IT systems should then flow from these two steps and enable and support the business processes"

Order Processing

Joyce Wrenn CIO of Union Pacific Railroad. CIO Magazine. Jan. 2002.
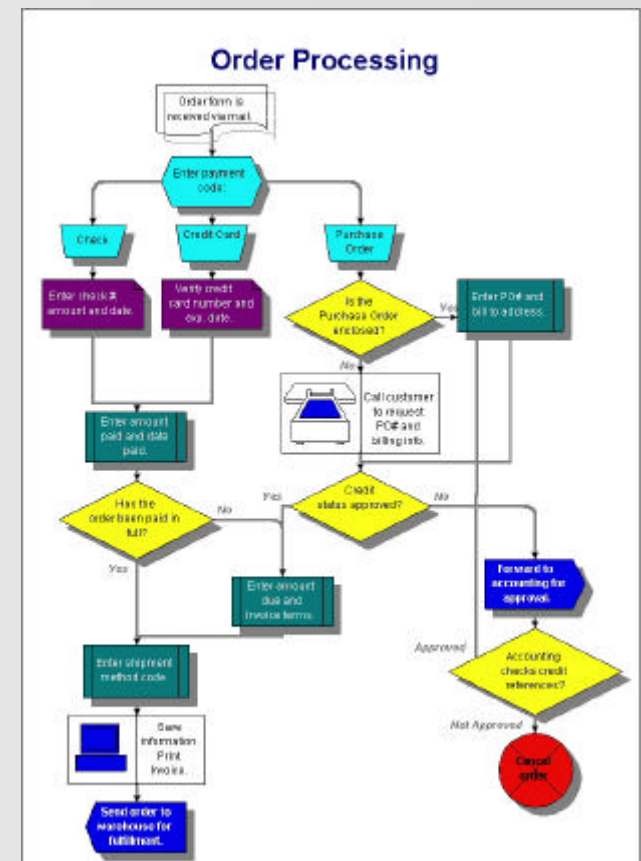
ROI is measured by process using KPI'S

PROCESSES

BENEFIT TYPES

EXAMPLES OF KEY PERFORMANCE INDICATORS

Support Depts. & Processes

| Information Technology |
| Revenue Cycle. Med. Recs. (HIM) |
| Retrospective Decision Support |

Core processes

| ADT | Ordering (+ POE) | Clinical Documentation + Ambulatory |

Operations
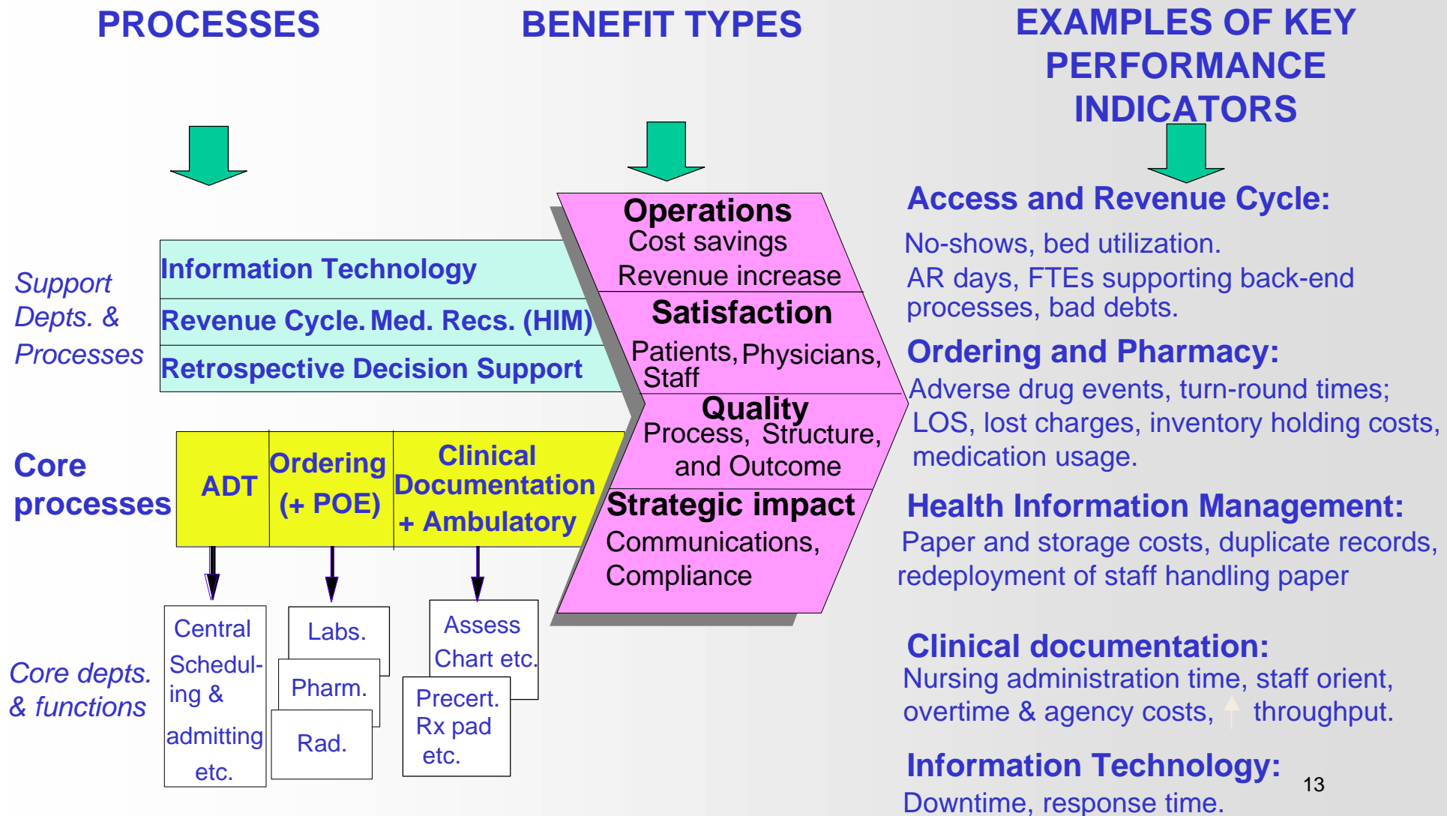Cost savings
Revenue increase

Satisfaction
Patients, Physicians, Staff

Quality
Process, Structure, and Outcome

Strategic impact
Communications, Compliance

Core depts. & functions

Central Scheduling & admitting etc.	Labs.	Assess Chart etc.
	Pharm.	Precert. Rx pad etc.
	Rad.	

Access and Revenue Cycle:

No-shows, bed utilization.
AR days, FTEs supporting back-end processes, bad debts.

Ordering and Pharmacy:

Adverse drug events, turn-round times; LOS, lost charges, inventory holding costs, medication usage.

Health Information Management:
Paper and storage costs, duplicate records, redeployment of staff handling paper

Clinical documentation:
Nursing administration time, staff orient, overtime & agency costs, ⬆ throughput.

Information Technology:
Downtime, response time.

13

The challenge for system vendors

There are 4 ways to maximize the value from an IT investment

1. Purchase an **integrated** system with rich **functionality**

2. Ensure the software has **flexibility** of design

10% of value

3. Chose a vendor with knowledge of their own **best practice processes**

4. Work with your vendor to make **radical people changes**

90% of value

ROI is only maximized by a combination of people and process changes using the information systems as the catalyst

If customers are to realize any significant benefit they must be encouraged to make significant people and process changes
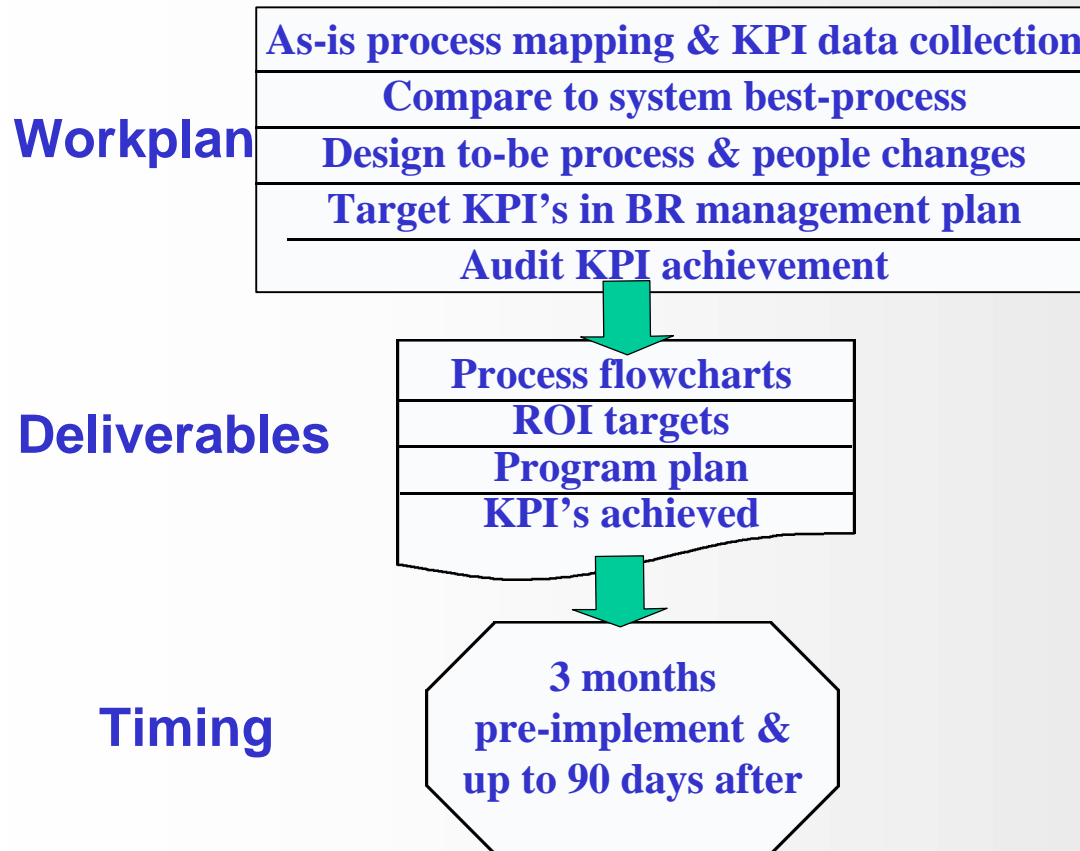
People

Technology
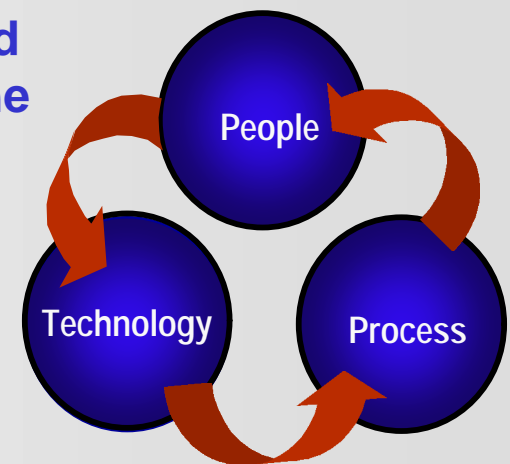
Process

The challenge for CIO's

"CIO's must be recognized by their peers as technology enablers who increase shareholder value by helping to reduce operating costs or increase revenue by examining business processes that can be improved, enhanced or totally reinvented through the application of technology.

Simply installing the latest and greatest enterprise application system is not enough: it requires rethinking the way in which technology can actually change how the enterprise conducts business".

(Using measurements to demonstrate the business value of IT: Gartner 2000)

A Benefits Realization program

Workplan

As-is process mapping & KPI data collection
Compare to system best-process
Design to-be process & people changes
Target KPI's in BR management plan
Audit KPI achievement

Deliverables

Process flowcharts
ROI targets
Program plan
KPI's achieved

Timing

3 months
pre-implement &
up to 90 days after

Client benefits

Agreed ROI targets maximized
Agreed PI , CM & IMP action plans
Agreed program management plan
Success in achieving targeted KPI's

Risk/Reward

BR program deliverables

ROI target-setting

The process improvement project

The cultural change project

The implementation project

Project file

BR Program management

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Is HIPAA a gold mine?

A $500 million Integrated Delivery System can can save $6 million by accelerated reimbursement and eliminating claim write-offs and $4 million by reducing expenses every year.
KPMG paper 2001

E-transactions can save $73 billion per annum: one third of all healthcare administration costs
1994 Workgroup on EDI

$17.6 to implement $29.9b. benefits over 10 years
Department of Health & Human Services

After 2003, Care Delivery Organizations with patient accounting systems that don't provide direct 837 bill claim transactions to payers will be exposed to gross margin decreases of 10% – 15% a year until this short-coming is resolved.

Gartner Nov. 2001: HIPAA Impacts on Patient Accounting 837/835 transactions.

19

..............it could be

MAYO CLINIC

	Total claims paid	**FTE's**	**Claims paid In 30 days**	**Claims paid In 60 days**
Paper	60%	27	30%	60%
Electronic	40%	2	80%	98%

(Privacy rules are NOT considered in this presentation)

Mining the gold

Needs radical process and people changes

To maximize ROI, HIPAA compliance should not be pursued as a totally separate project but should be directly incorporated as part of an HCO's strategic and tactical business transformation and technology planning
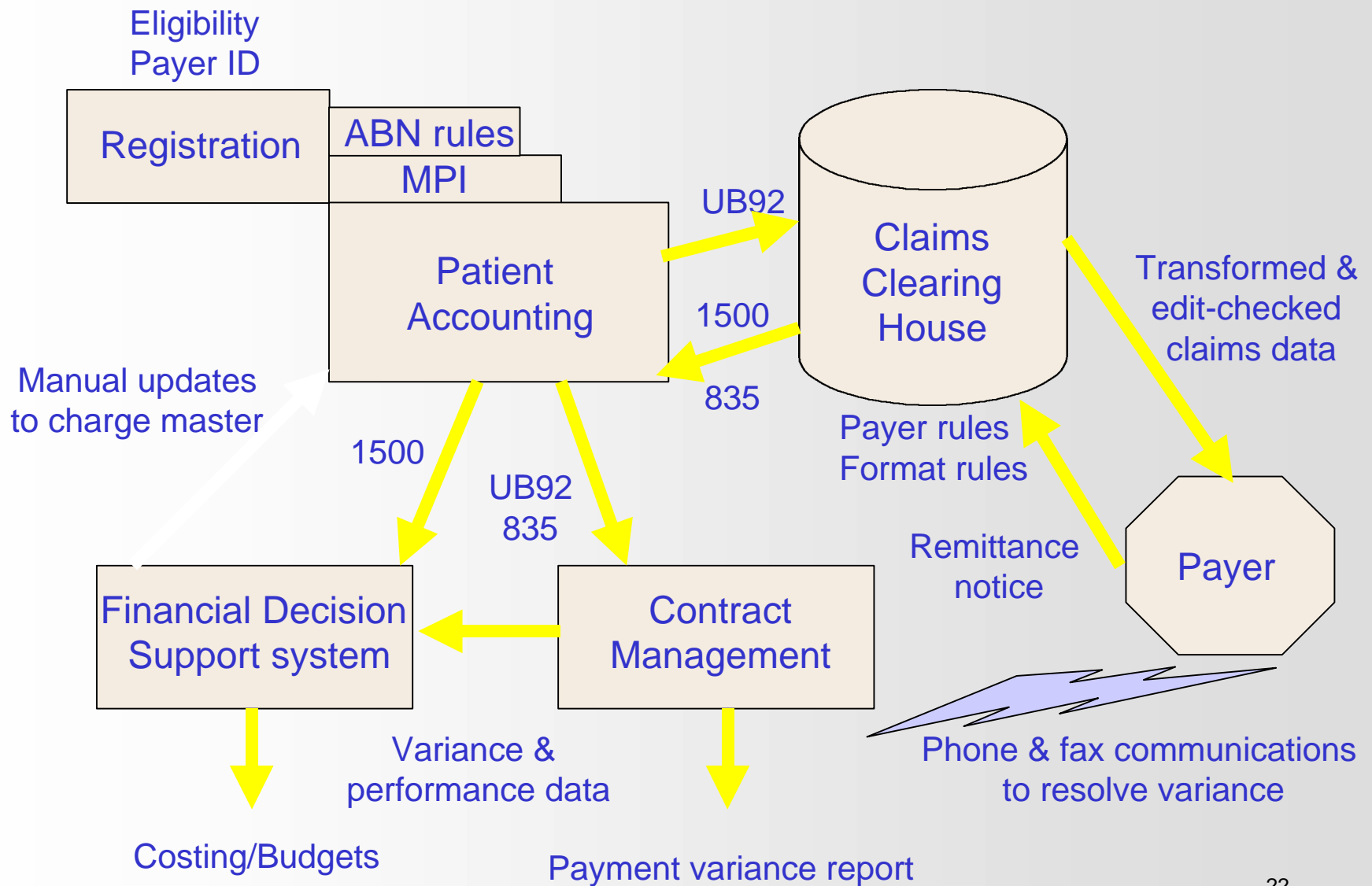*The HPAA payoff – a tangible ROI. Gartner research note 3/15/01*

HIPAA is NOT a compliance issue. Use it as an opportunity to:

❑ Reduce or eliminate on-going clearing house costs
❑ Eliminate expense and inefficiency of data translation between 3rd party products, clearing houses and your care application
❑ Reduce AR days

21

The current chaotic process

Eligibility
Payer ID

Registration

ABN rules

MPI

Patient
Accounting

Manual updates
to charge master

UB92

1500

835

Claims
Clearing
House

Payer rules
Format rules

Transformed &
edit-checked
claims data

Remittance
notice

Payer

1500

UB92
835

Financial Decision
Support system

Contract
Management

Variance &
performance data

Phone & fax communications
to resolve variance

Costing/Budgets

Payment variance report

22

Revenue cycle management ---- 2005 scenario ©*Gartner research 2002*

Mining the gold

Current systems require difficult to support interfaces especially with the clinical systems

Healthcare entities can institute same day or 24 hour turnaround service for most of their transactions
HIPAA just good e-biz. Michael Doscher for healthleaders.com 12/21/2000

Currently rules are needed in the system to determine eligibility, co-pays and ABN's are usually provided through third party systems then sent to claims speaking houses to:
❑ 'Scrub' for appropriate coding
❑ Transform – change data into payer's format
❑ Aggregate and electronic transport of claims to payers

The current chaotic process

Even the best performers are under- performing

Gross days revenue outstanding	
Under 40	14%
40 to 50	55%
50 to 55	31%
Average is	44%

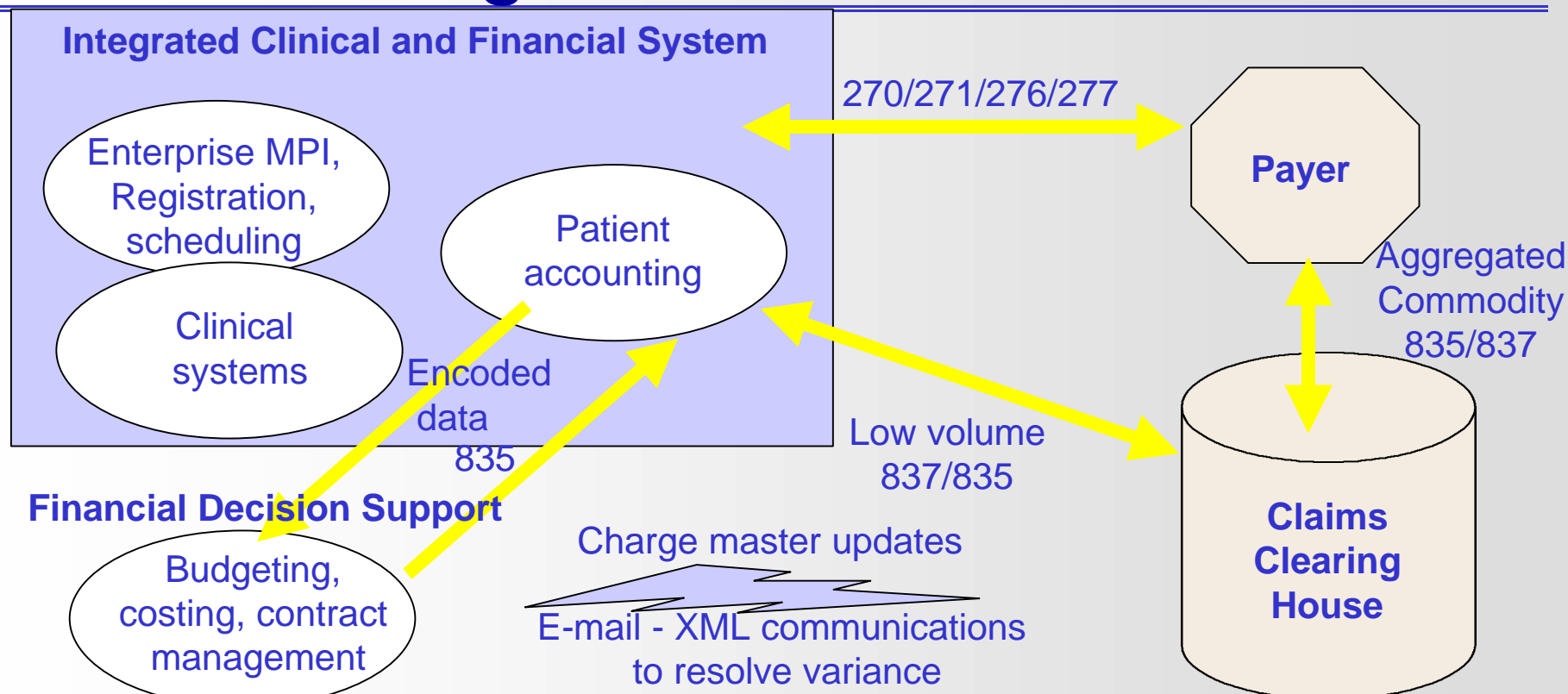| Year-to-date bad debt	
Under 1%	27% of hospitals
1% - 2%	27%
2% - 3%	27%
3% - 4%	18%
Average is	2% bad debt

Zimmerman & Associates best performers survey 2001

No one else even measures gross revenue!

The building blocks for the revolution

Integrated Clinical and Financial System

Enterprise MPI, Registration, scheduling

Clinical systems

Patient accounting

Encoded data
835

270/271/276/277

Payer

Aggregated Commodity 835/837

Financial Decision Support

Budgeting, costing, contract management

Low volume 837/835

Charge master updates

E-mail - XML communications to resolve variance

Claims Clearing House

Low volume transactions will still go through clearing houses. "Consolidation of 30 – 40% of current clearing houses by 2005 (.8 probability)
"By 2005 we expect computer-based patient record applications will have matured to the point where they they generate highly-accurate encoded data from clinical documentation and order-entry applications that will be used to produce a patient bill which has been compliance checked at registration, during service delivery and just before the direct 837 is compiled".
CPR's produce data for claims attachments for supporting pre-authorization of clinical services

25

All from Gartner Revenue Cycle Management 2005 scenario. Feb. 2002

Improve the process: the way to go

Check eligibility etc

↓

**Pre-reg. Pre-admission tests; treat**

↓

Drop & code charges

↓

Clean and submit claims

❑ Patient make an appointment on the Web, provider electronically checks insurance cover (270,271), & tells patient how much they will have to pay

❑ Provider checks coverage and obtain authorizations (278)

❑ Collect all demographic data before arrival

❑ Collect cash at point of service (Enterprise-wide MPI ensures correct identification of payers, patients and employer)

❑ Charges drop automatically from the clinical system

❑ Physician tools to collect appropriate ICD9 and CPT4 codes etc.

❑ Billed on day of departure (simplified bill for patient: AHA & HFMA project): bill does not need to be held for accuracy or late charges

❑ Claims cleaned in-house using small number of edits (rules minimized) & submitted electronically (837)

❑ Claims attachments automatically extracted from clinical systems and attached electronically (837)

26

Improve the process: the way to go

Claims worked

Cash received

Claims maximized

Staff empowered
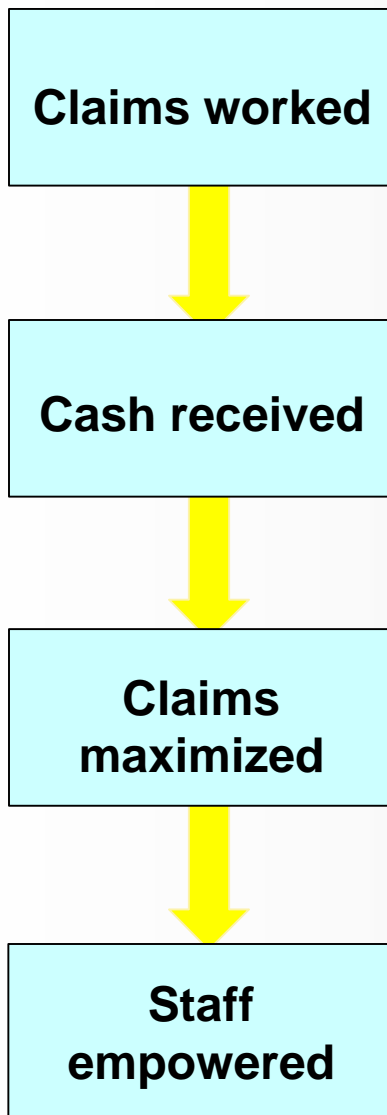
❑ Patient and provider access updates on claims status electronically (276,277)

❑ Cash received electronically (835) and banked

❑ Automatic submission of bill to secondary payers (835)

❑ Collection by phone: or through the Internet

❑ Virtually no use of collection agencies

❑ Contract management system automatically checks payments and submits additional claims

❑ Rate negotiations based on meeting Leapfrog standards (link to clinical system for POE volumes)

❑ Detailed contract history used to minimize on-going contracted rates

❑ All Access and Revenue staff report to the same highly-paid VP

❑ Individual collector performance-related pay

27

Estimating staff savings: HFMA study

Flow	Description
Check eligibility etc (270, 271)	A 350 bed hospital has 4 to 6 FTE's. Calls average 10 minutes, electronic averages 2 minutes: saving of 1.25 FTE's
Services review request (278)	Services review involves clinical, registration, financial counseling plus a nurse to get clinical data. 20 to 30 minutes per call. Saving of 2 FTE's from telephone calls only (ignores automated clinical information collection)
Claim submission (837)	Hospitals submit 65% of claims electronically currently. Paper bill takes 5 to 6 minutes to review, sign and put in envelope. 30% to 35% edit rate on initial bills is typical: the billing system insurance profiles are outdated). 1 FTE saving for 350 bed hospitals
Claims status requests (276,277)	Currently all inquiries are by phone. 40% to 50% of billing office staff work in this area. With only 25% of transactions automated, save .5 FTE for Medicare, Blue Cross and Medicaid, 2 FTE for commercial payers and 3 FTE's who work on follow-up
Payment or denial (835)	25% to 30% are still manual. Save 1 FTE

28

Staff savings summary

Martin Brutscher: realizing savings from HIPAA transaction standards. For HFMA 2001

**Total of 10.25 FTE savings potential in 350 bed hospitals
But 5.25 FTE's are assumed to be re-allocated to other processes:
virtually NO Process Improvement or greater use of technology
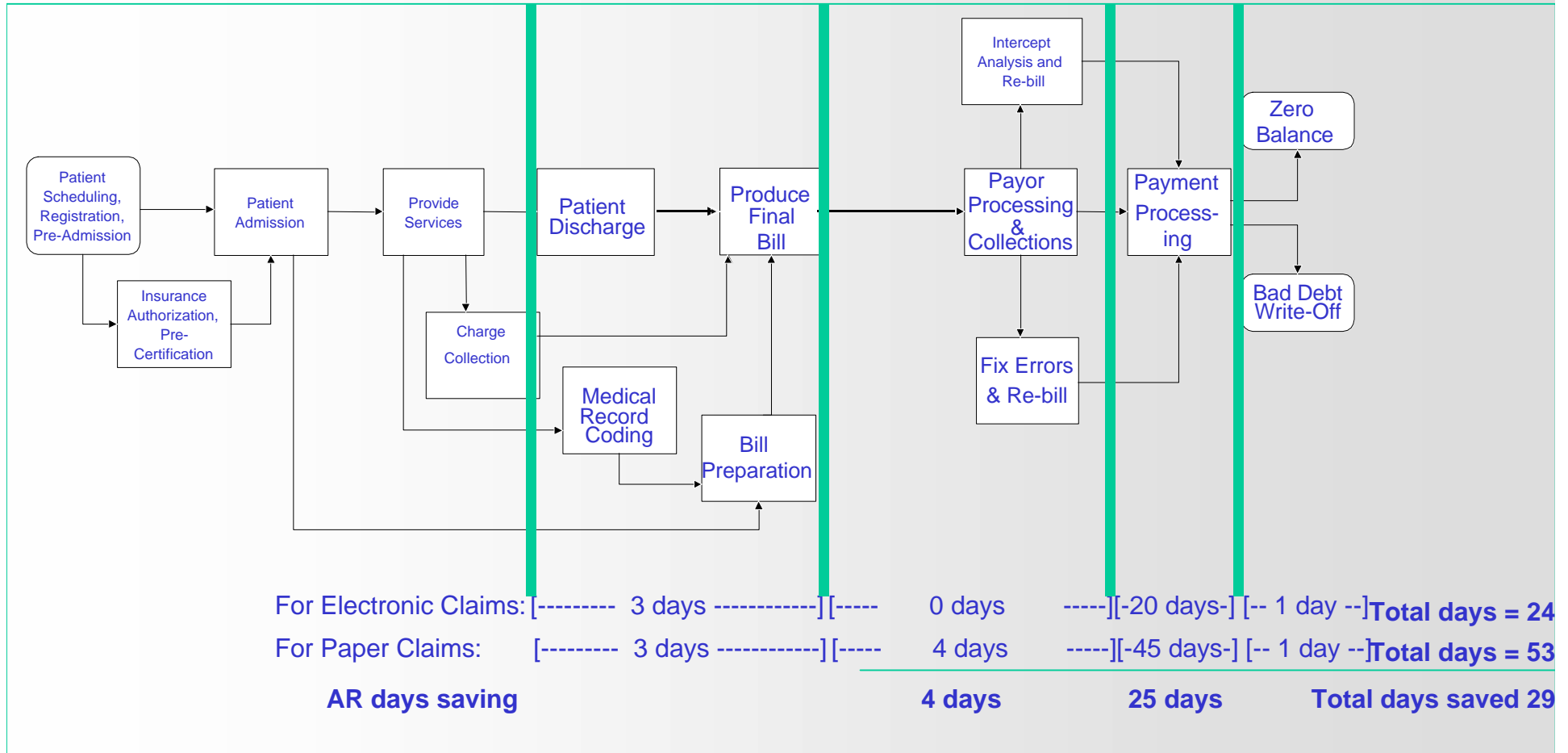assumed!! Therefore staff savings estimated at $187,500 per annum.**

Another gross under-estimate?

"20% to 30% of Health Information Management staff used for coding and
data abstraction can be released."

Revenue Cycle Management: 2005 scenario: Gartner

29

Revenue cycle days savings

For Electronic Claims:	[--------- 3 days -----------]	[----- 0 days -----]	[-20 days-]	[-- 1 day --]	Total days = 24
For Paper Claims:	[--------- 3 days -----------]	[----- 4 days -----]	[-45 days-]	[-- 1 day --]	Total days = 53
AR days saving		4 days	25 days		Total days saved 29

Bill hold 9 days Medicare*
8 days Other*

Total days = 64*

*3rd quarter 2001 Average HARA**

Zimmerman & Associates 2001   **Best hospital total days = 32****

Revenue cycle dollar savings

	350 beds	500 beds
Annual revenue	$250 million	$350 million
One day in AR	$685,000	$1 million
Twenty-nine days in AR	$20 million	$28 million
Invested at 5% per annum	**$1 million**	**$1.4 million**

Bad debts, denials and paper savings

Saving measured	350 bed hospital	500 bed hospital
Bad debt reduction **1.**	$1,875,000	$2,625,000
Authorization denial reduction **2.**	$750,000	$1,050,000
Other cost savings **3.**	$20,000	$30,000
	$2,645,000	$3,705,000

1. 25% of bad debts result from poor pre-registration data. If the current bad debt % is 3%, it can be reduced by .75% (based on revenue of $250 million for a 350 bed hospital)

2. Average 350 bed hospital writes off $1m to $1.5m or .006% of its revenue due to authorization and timely filing issues. Can be reduced by 50% or a .003% reduction.

3. Includes paper bills and mailing of statements to patients.

Ignores significant savings from clearing house costs, fewer out-of-network referrals + all patient satisfaction benefits including improved access, less re-scheduling etc.
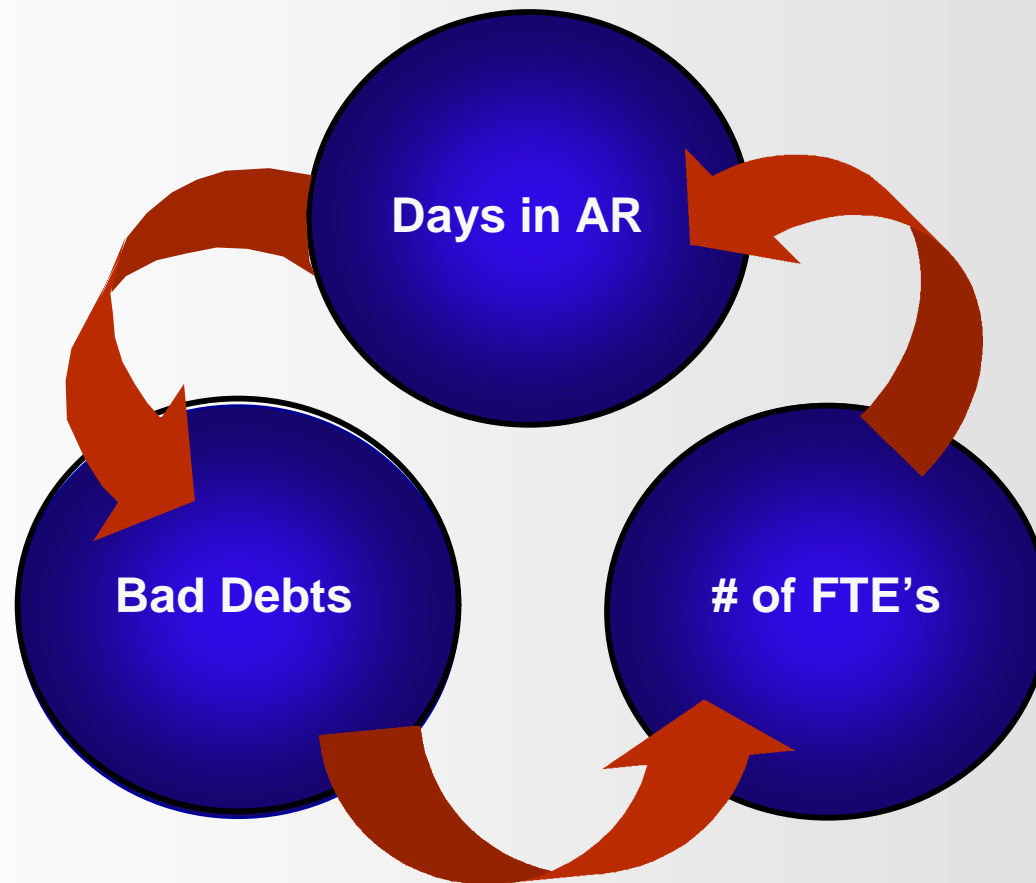
These figures are very conservative: for example

Rejected claims will be reduced from 11% to 5% with a saving of $15 million in annual cash flow for a 350 bed hospital

The HPAA payoff – a tangible ROI. Gartner research note 3/15/01

Conclusion: target three KPI's.....

…and mine the gold

TECHNOLOGY

Invest in new generation integrated systems

PROCESSES

Radically improve processes

Leadership ability to take staff along

PEOPLE