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Creating Real Business Advantage from Document Inspection

and Winning at Pinball

by

Dick Holland

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Our Journey...

Where we started

1994 - the way we were

What we learned about quality...

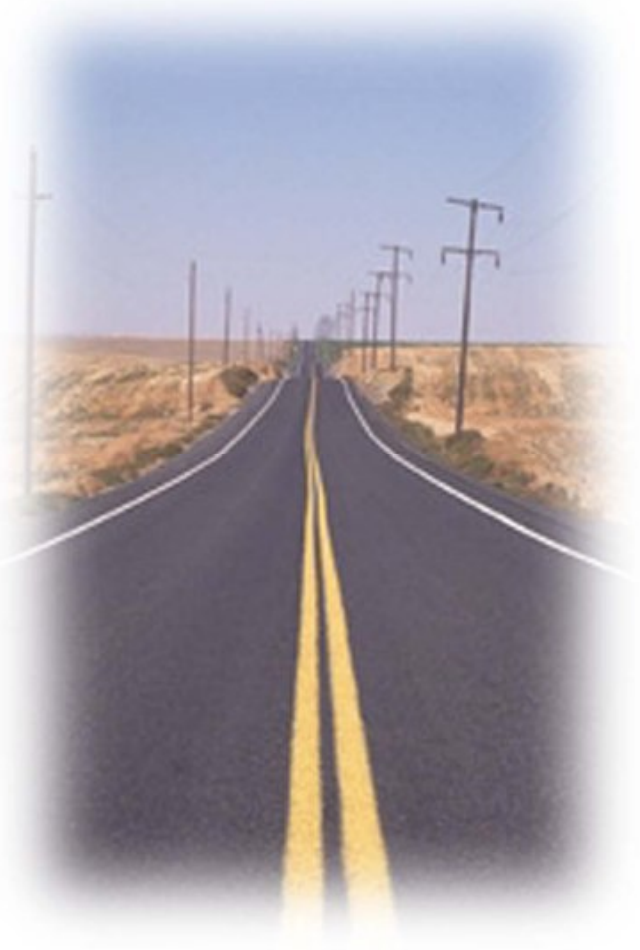
...and how to improve it

Where we've been

The lessons we've learned on the way

Where we are now

Where we're going



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1994 - The Way We Were...

Complex business area

- Intricate business processes
- Driven by legislation and regulation
- Mission-critical application

Product needs

- Breadth and depth of functionality
- Flexibility and configurability

…But - The Way We Were!

- Poor product *quality*
  - Barrier to further sales
  - Inhibiting customer loyalty
- Poor culture for change
  - *Functional stovepipes*

We didn't know what to do about it!

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November 1994 - Epiphany

Our deliverance by Kai & Tom Gilb

- Quantified System Attributes
- Defect Detection by Document Inspection
- Defect Prevention by Continuous Process Improvement
- Process ownership

We started to learn how to *think*!

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What Do We Mean By Quality?

Some attributes that interest a customer:

How often does it break?	*(Reliability)*
How easy is it to use?	*(Facility)*
Does it do everything I want?	*(Functionality)*
Does it do it quickly enough?	*(Performance)*

Some attributes that interest me:

How easy to diagnose an error?	*(Diagnosability)*
How quick is it to fix?	*(Serviceability)*
How easy is it to test?	*(Testability)*

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Quantified System Attributes

Measures of *quality*

- Of software product
- Of our processes

Measure effect of Inspections

What to measure?

- Define Attributes
- Set objectives for product and processes

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External Attributes

Attributes that directly impact customers

Published externally

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Our ***Reliability*** Attribute

Gist The degree to which Icon delivers error-free running for users

Scale The number of high- and low-severity reported errors per customer per year

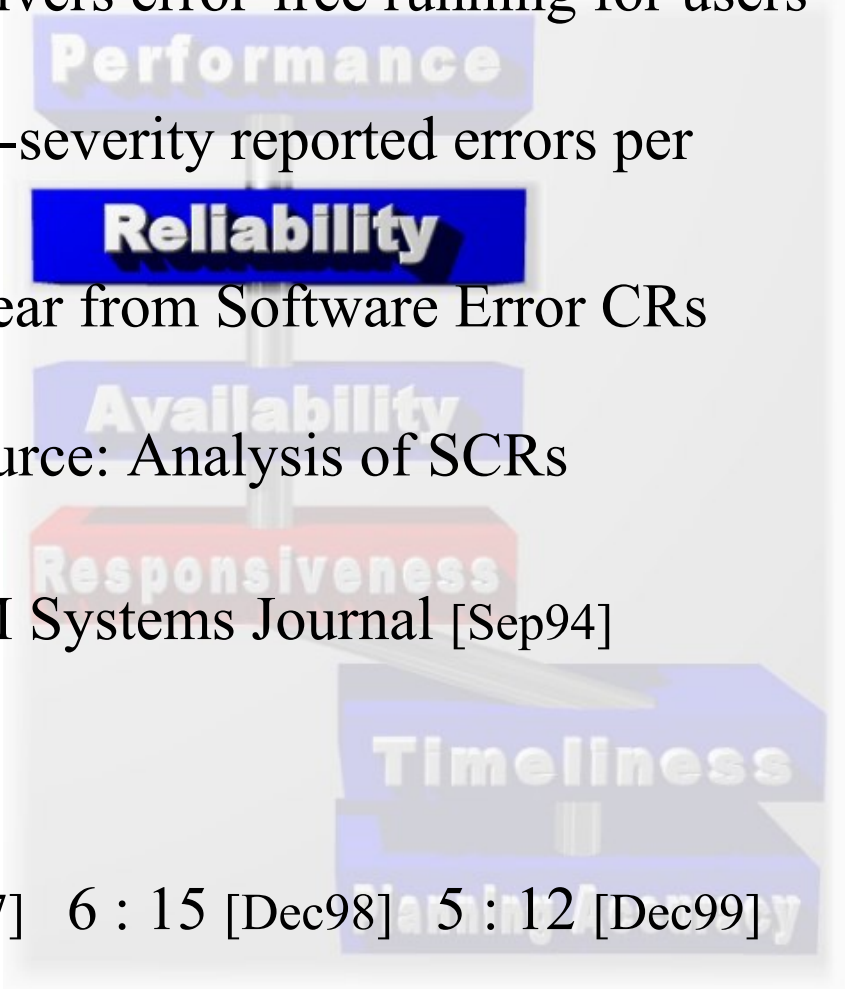
Meter Error rate per customer per year from Software Error CRs

Past 51.4 : 54.4 [May94 - Apr95] Source: Analysis of SCRs

Record 0. Space shuttle. Source: IBM Systems Journal [Sep94]

Must 24 : 60 [Dec95]

Plan 18 : 45 [Dec96] 12 : 30 [Dec97] 6 : 15 [Dec98] 5 : 12 [Dec99]
4 : 10 [Dec00] 3 : 8 [Dec01]



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How Do We Improve Quality?

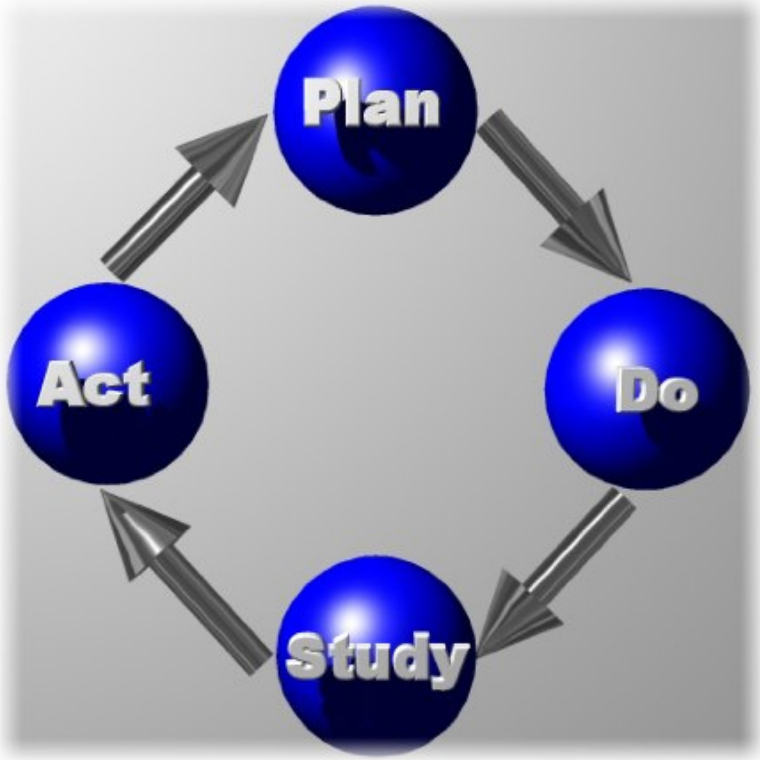
Set objectives for each Attribute to be measured

Define strategies to meet those objectives

Defect detection & removal for
Reliability

Design our processes to include *learning*

Shewhart/Deming
Plan-Do-Study-Act Cycle



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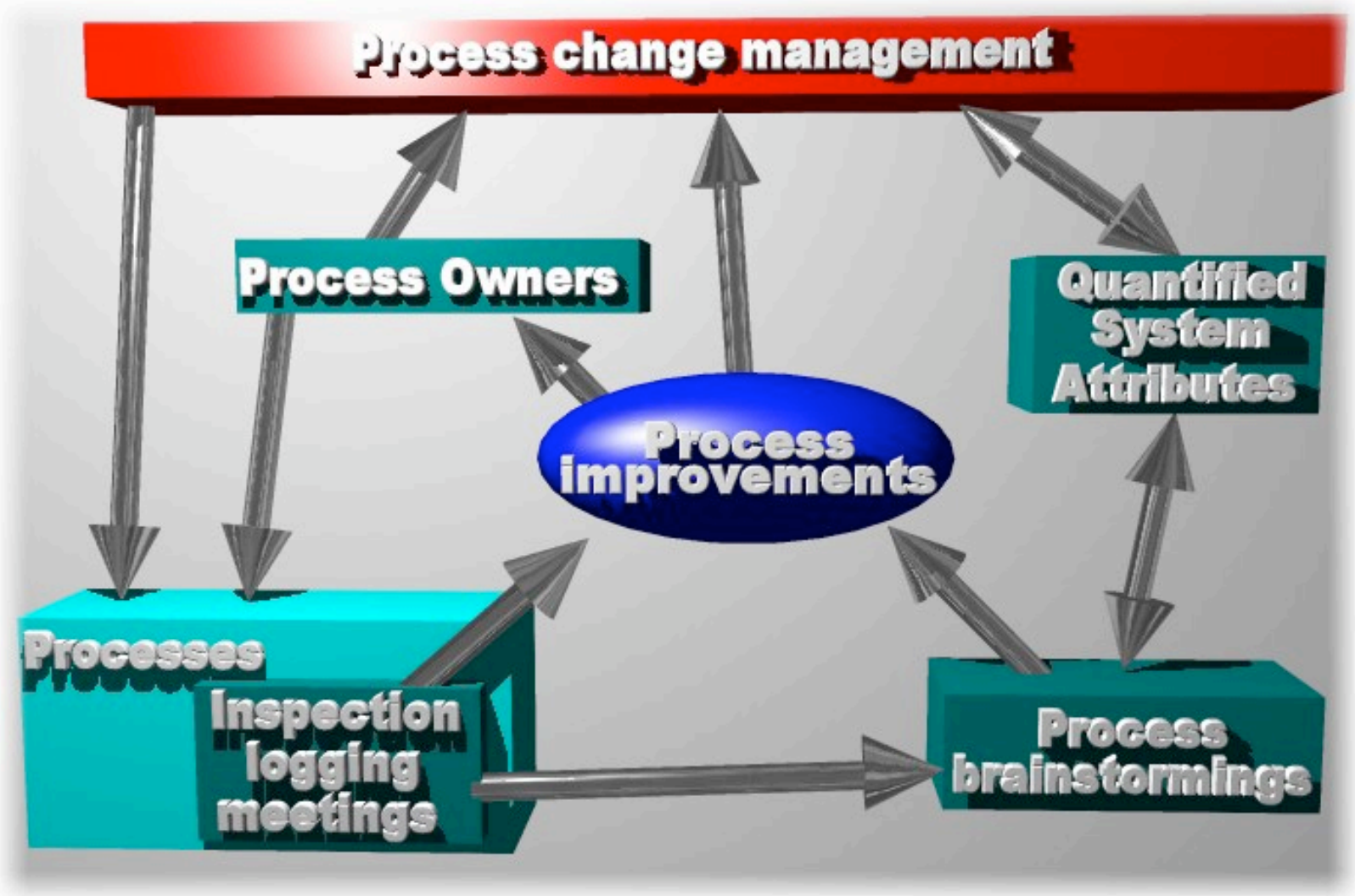
Continuous Process Improvement



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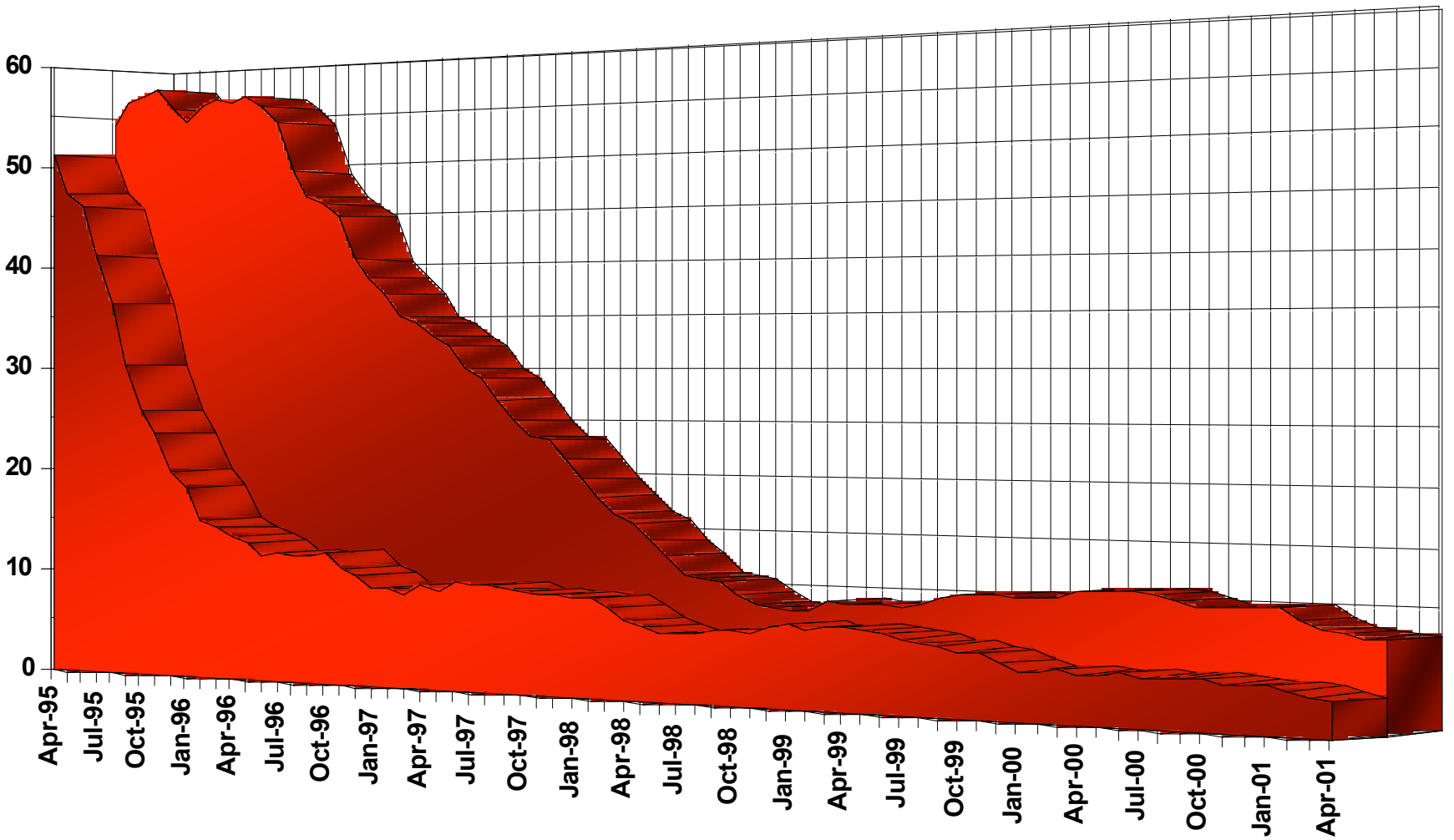
Our ***Reliability*** Attribute



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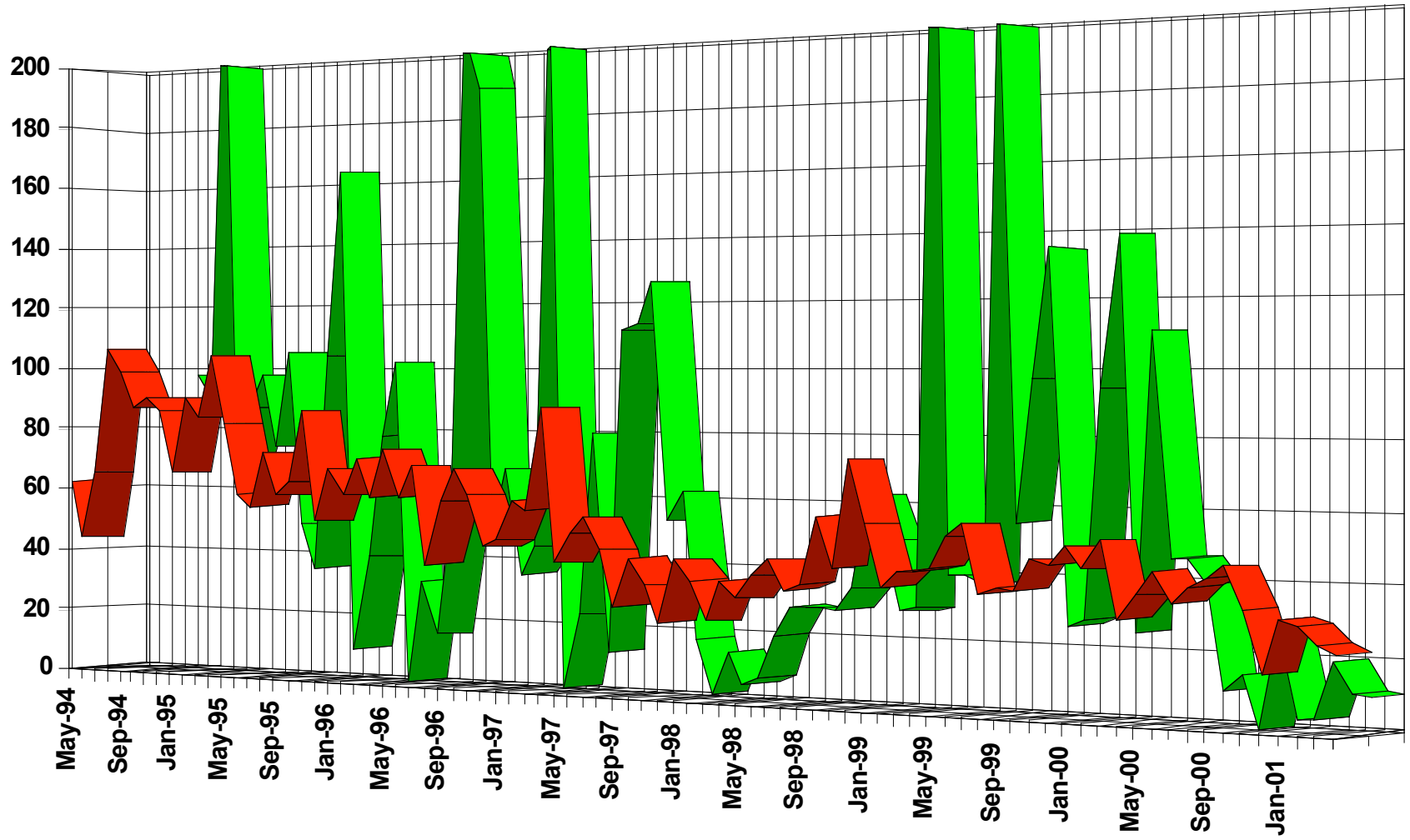
Inspection Effectiveness



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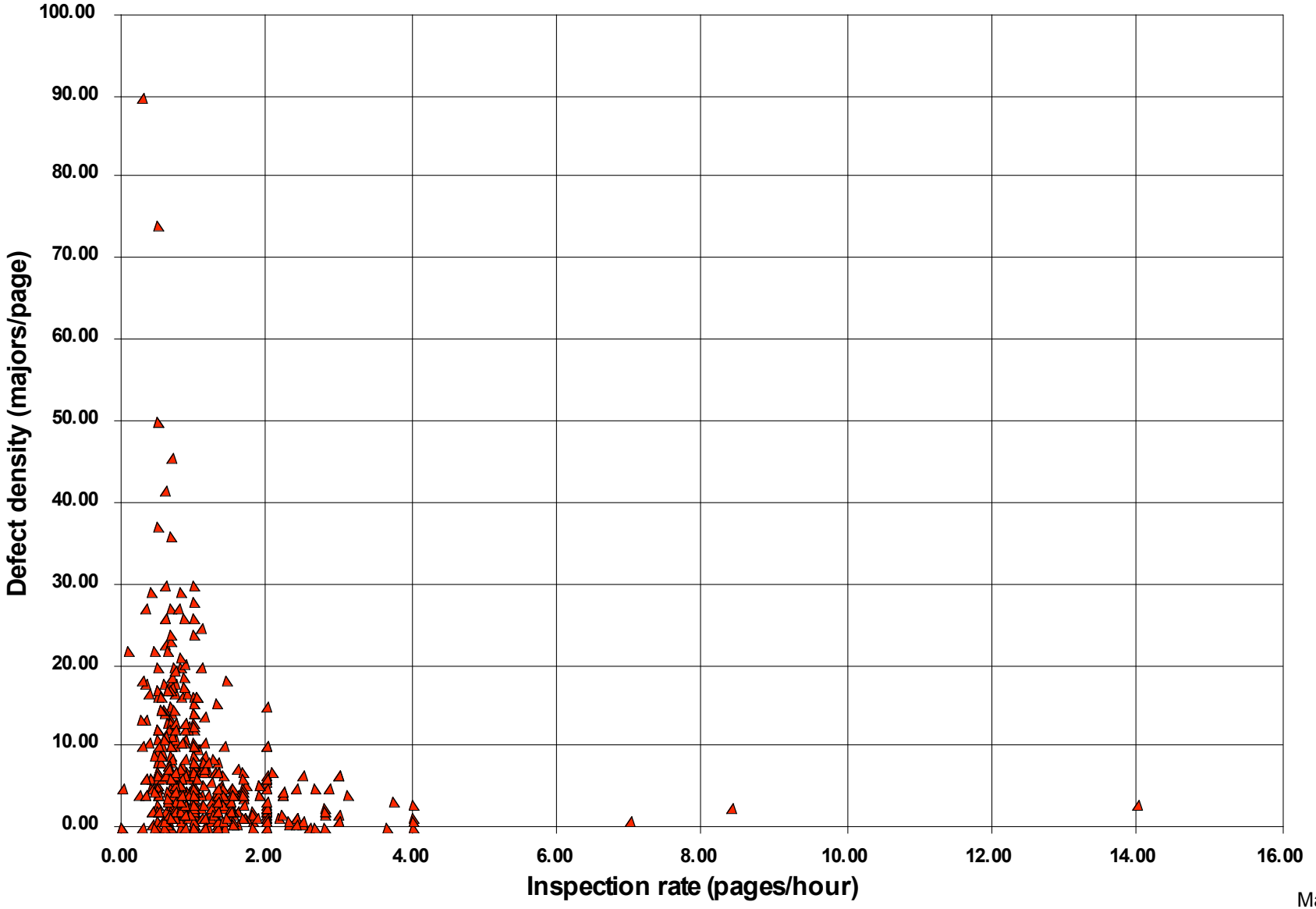
Optimum Checking Rate



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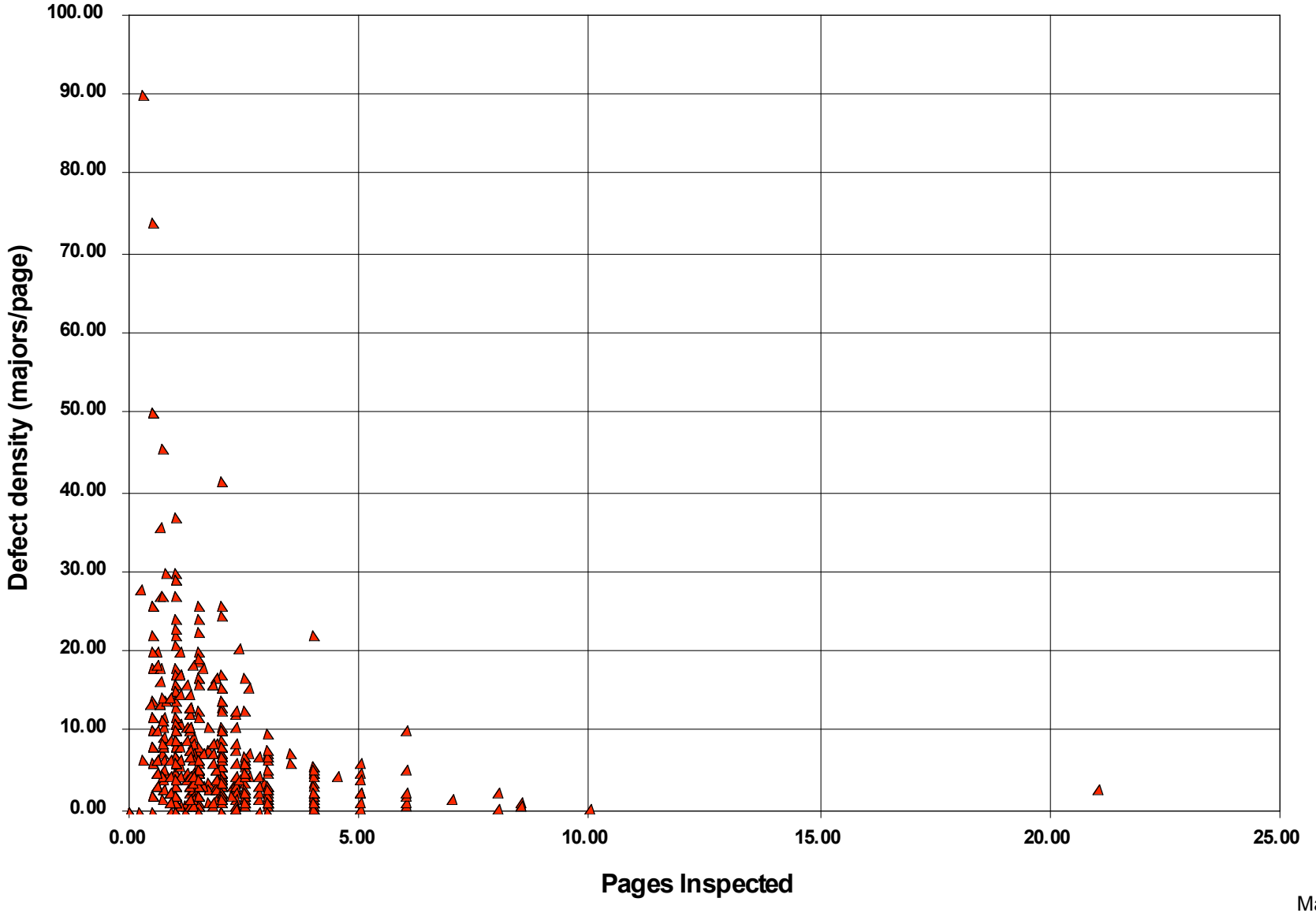
Optimum Document Size



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The First Six Years

	Apr '95	Apr '01	
PSL 1-3 errors QSA	51.4	1.8	***-96%***
PSL 4-6 errors QSA	54.4	7.7	***-86%***
PSL 1-3 errors MTTR	137	33	***-76%***
Rework costs (work-years/year)	27.3	6.4	***-76%***
Development team size	43	24	***-44%***

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The Way We Are Now

Inspections becoming embedded in-process

Values that we wish to have everywhere

Everyone's in the *Quality Department*

Projectising and ***Customerising***

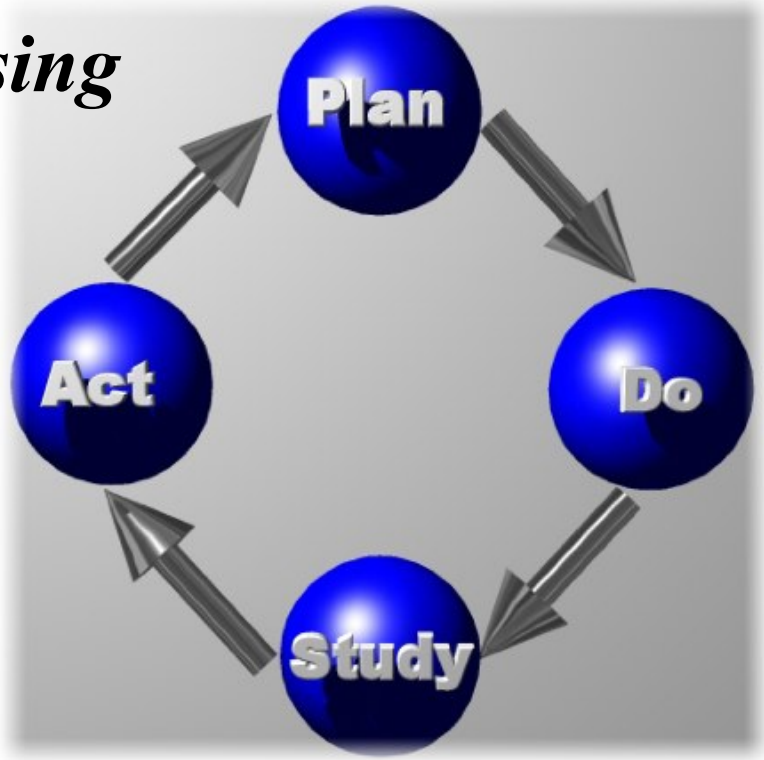
Self Managed Case Teams

Project & People Objectives

Change-oriented culture

Learning Organisation through

Continuous Process Improvement



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Inspection Values

Every participant:

- **V** oluntary
- **O** pen
- **T** eam-oriented
- **E** galitarian
- **S** upportive

It's now *the way we do **everything** around here*

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Our Values

Open publication to customers and prospects

All Quantified System Attributes
- including error rates!

http://www.pimsl.com

Ensures we ***do what we say we will do***

The Business Advantage

Continuous Software and Service Improvement

- Key differentiator
- Market reputation

Thomson Financial Icon ***100%*** Referenceable [Dec99]

Positively Outrageous Service!

The proposed Icon Software Guarantee:

For each PSL 1-3 error that is subsequently actioned we will credit <*an amount*> against future charges

So How's The Pinball Going?

The game of pinball

The more games we win,

the longer we stay on the table

Thomson Financial Icon

Thomson Financial PreView

Thomson Financial Fortis

Thomson Financial PAR

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What Have We Learned?...

Give it purpose

- Customer/business focus
- Highest quality at lowest practical cost and time
- ***Not*** abstract pursuit of perfection

Publish metrics from Day One

- Cost and time spent
- Defects found
- Predicted downstream savings

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…What Have We Learned?

Resistance will be fierce

- Perceived threat
- *My system/situation/department is different/more complex*

Be absolutely relentless

- Never, ever give up

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The Biggest Lesson Of All

We are not helpless

Don't wait to be *empowered*

Start small and grow

Carpe Diem!

(or as Nike says…)

And we never forget

Obstacles are the things we see when we lower our eyes from the vision

...The Way We Intend To Be

Our vision:

Our mission is to own products that are recognised as the best of their kind on every measurable scale