"Ugly Teams: Managing Difficult Conversations in Offshoring and Agile"

NY SPIN
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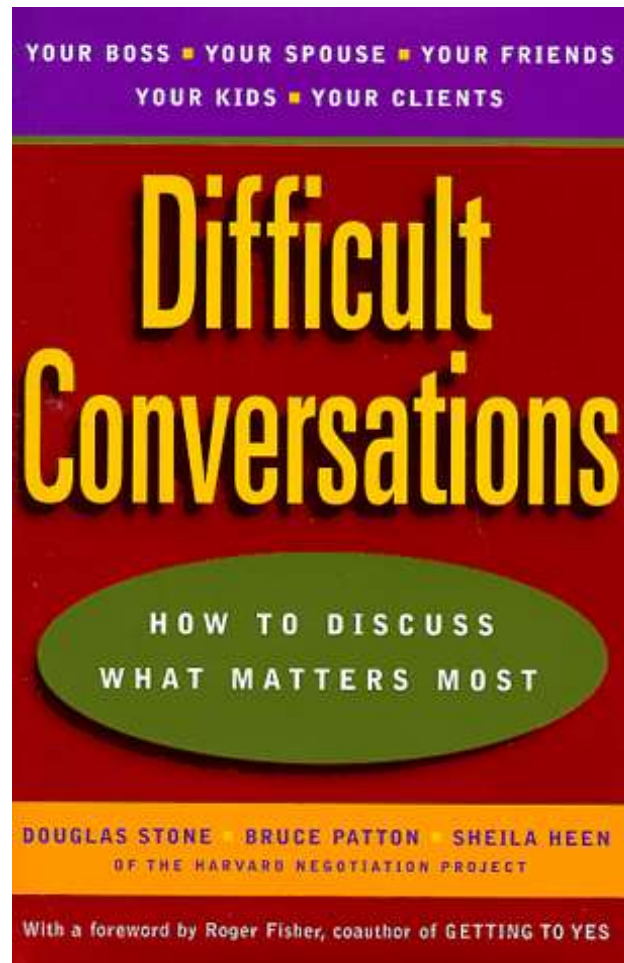Website: www.qsma.com
Blog: www.optimalfriction.com

DYSFUNCTION

THE ONLY CONSISTENT FEATURE OF ALL OF YOUR DISSATISFYING RELATIONSHIPS IS YOU.

www.despair.com

Difficult Software Conversations
Are Really Three Conversations

Difficult Conversations

Focus is on communicating effectively in the face of difficult relationship and related issues

The Three Conversations

The "What Happened?" Conversation

The Feelings Conversation

The Identity Conversation

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The Intelligence behind
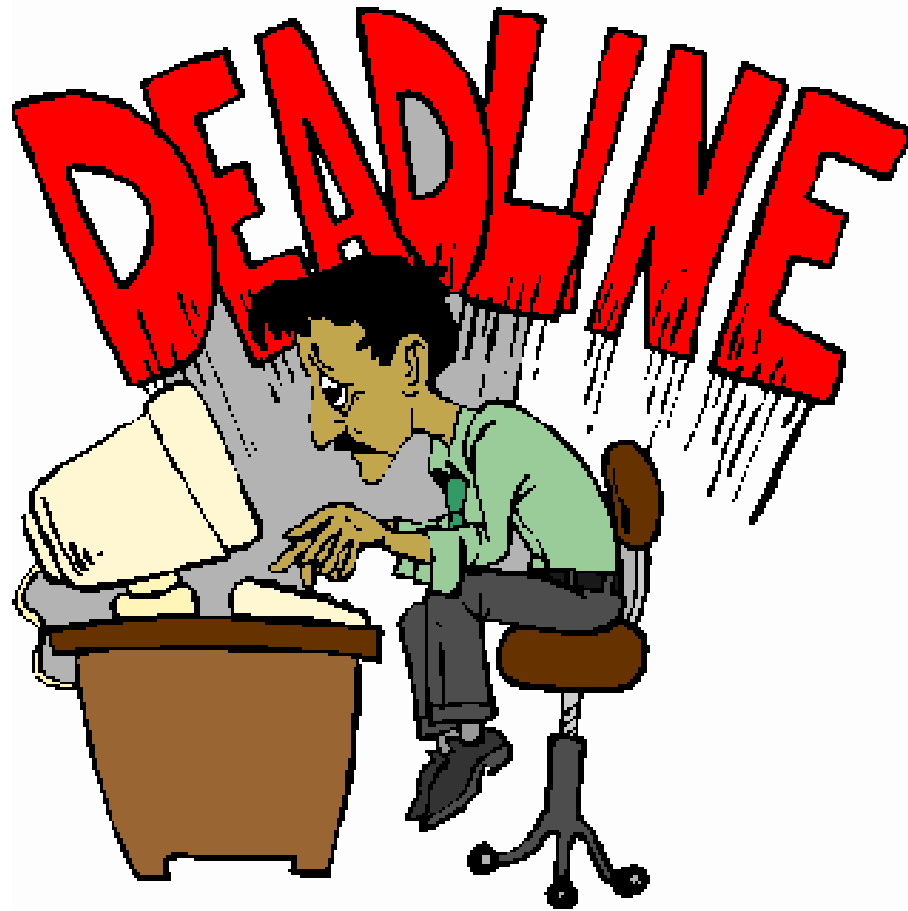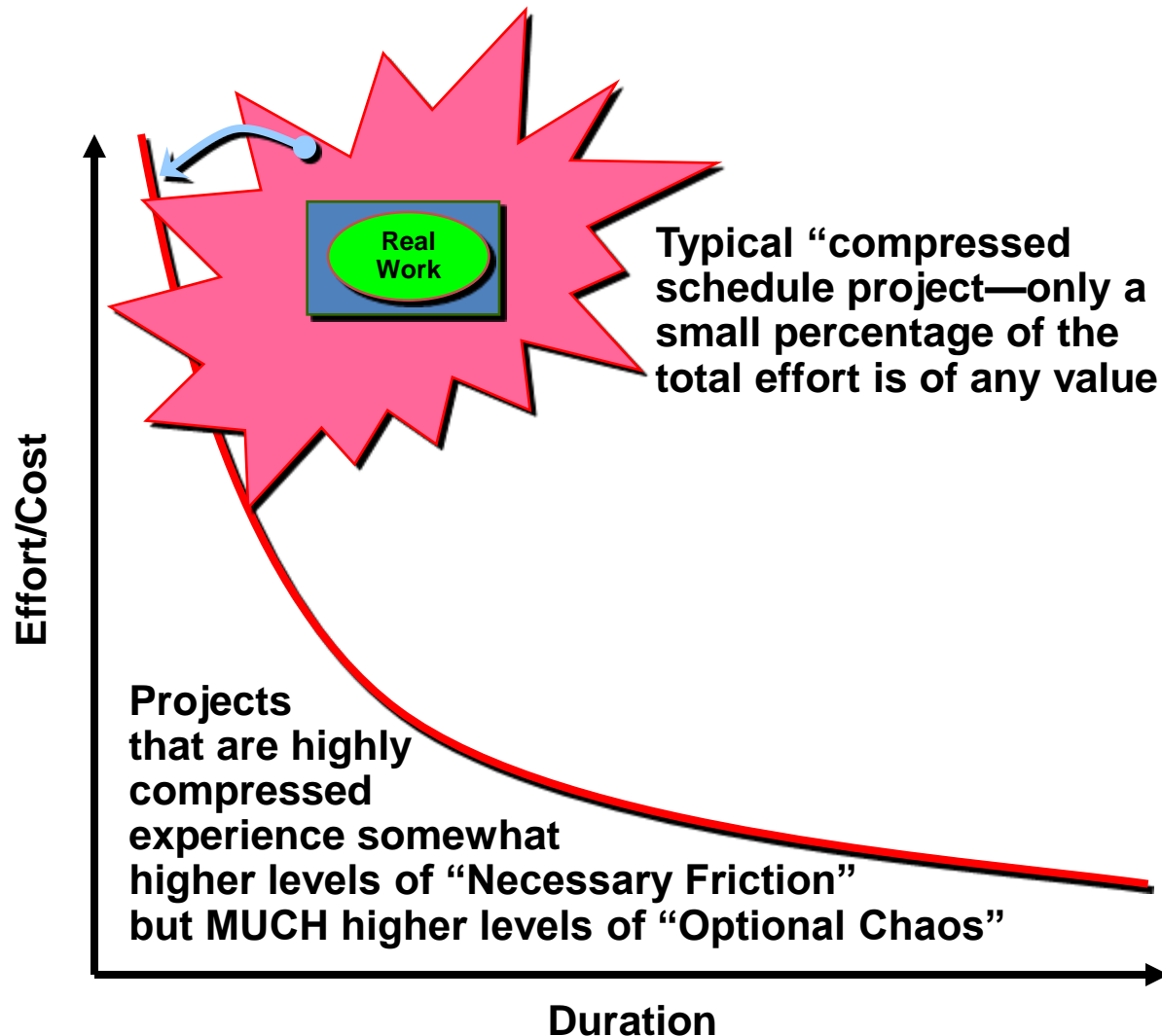Successful Software Projects

Revolutionary Hero

Guerilla Terrorist

Bigotry

Preference

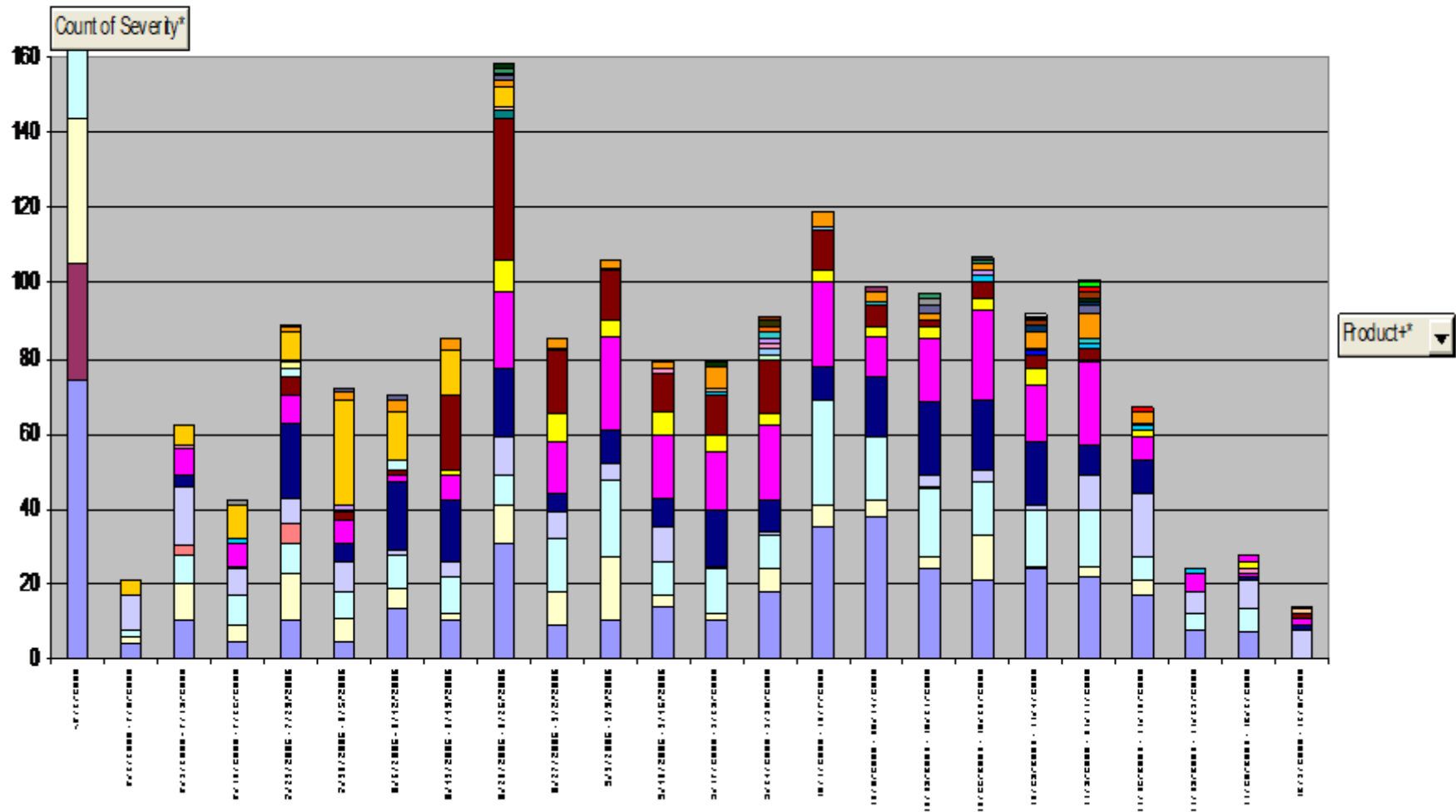# Defects and Sources of Technical Debt

Defects and Sources of Technical Debt

Short-Cycle Chaotic Projects

Real Work

Typical "compressed schedule project—only a small percentage of the total effort is of any value

Effort/Cost

Projects that are highly compressed experience somewhat higher levels of "Necessary Friction" but MUCH higher levels of "Optional Chaos"

Duration

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Rayleigh Curve Defect Rate

Difficult Offshoring Conversations

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"Chunk it, routinize it, digitize it,

…and then send it offshore"

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Offshore Difficult Conversation
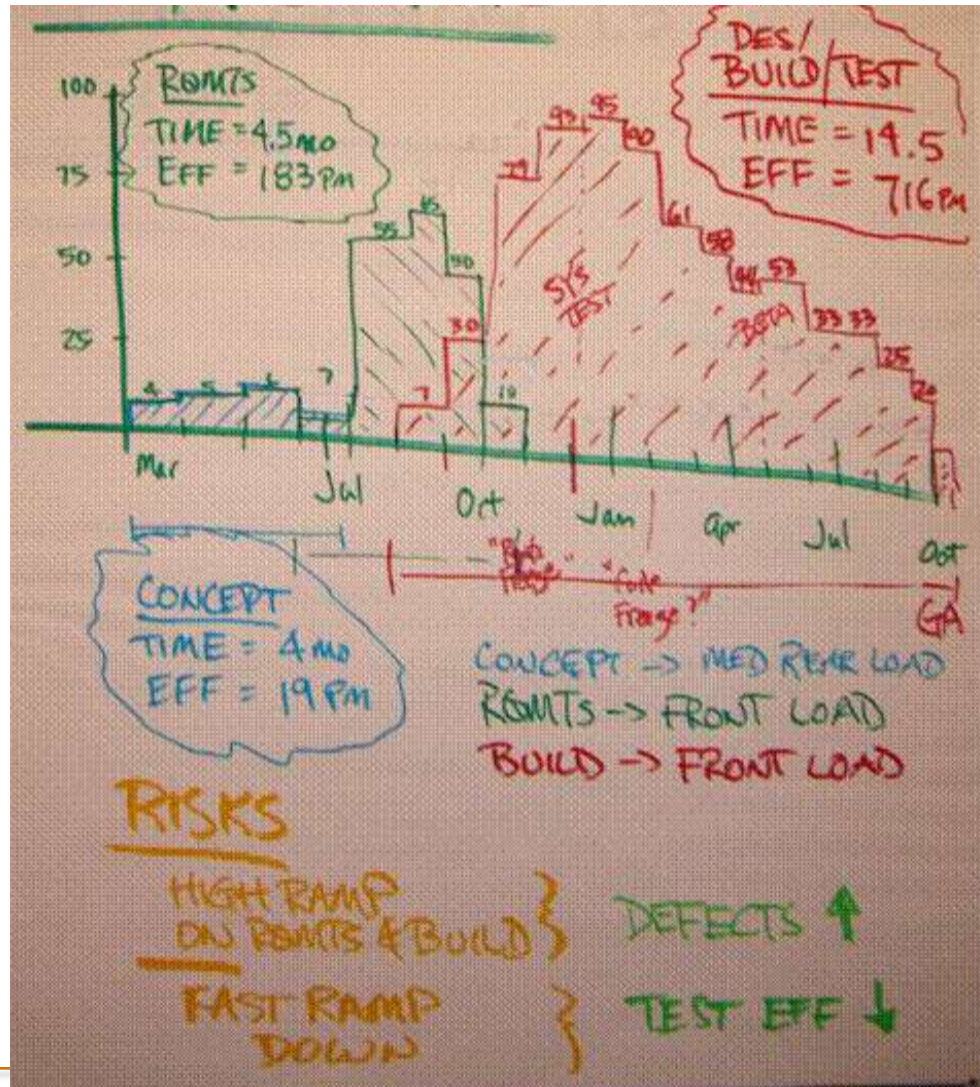
SLIM Replica – Release 9.5

Staffing & Probability Analysis

Avg Staff (people)
<Single Goal - MBI 4.433>

Milestones
- 0 - CSR
- 1 - SRR
- 2 - HLDR
- 3 - LLDR
- 4 - CUT
- 5 - IC
- 6 - STC
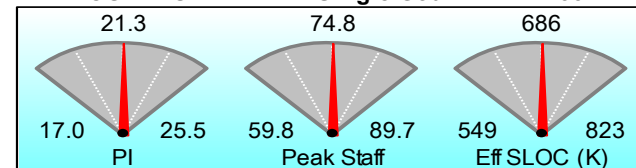- 7 - UAT
- 8 - FCR
- 9 - 99R
- 10 - 99.9R

Legend: CD, R&D, C&T
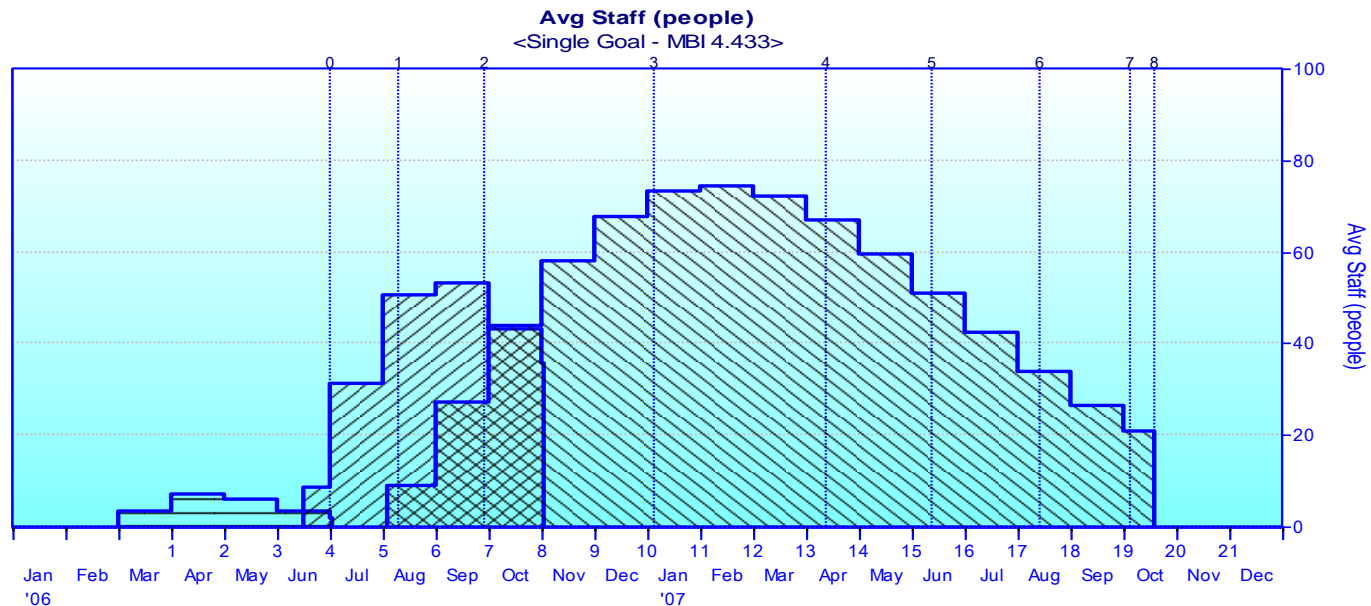
SOLUTION PANEL <Single Goal - MBI 4.433>	C&T	Life Cycle	
Duration	14.5	19.6	Months
Effort	716	919	PM
Cost	4153.2	5328.5	$ (K)
Peak Staff	74.8	74.8	people
MTTD	0.1	0.1	Days
Start Date	8/4/2006	3/1/2006	
PI=21.3	**MBI=4.4**	**Eff SLOC=686,000**	

CONTROL PANEL <Single Goal - MBI 4.433>

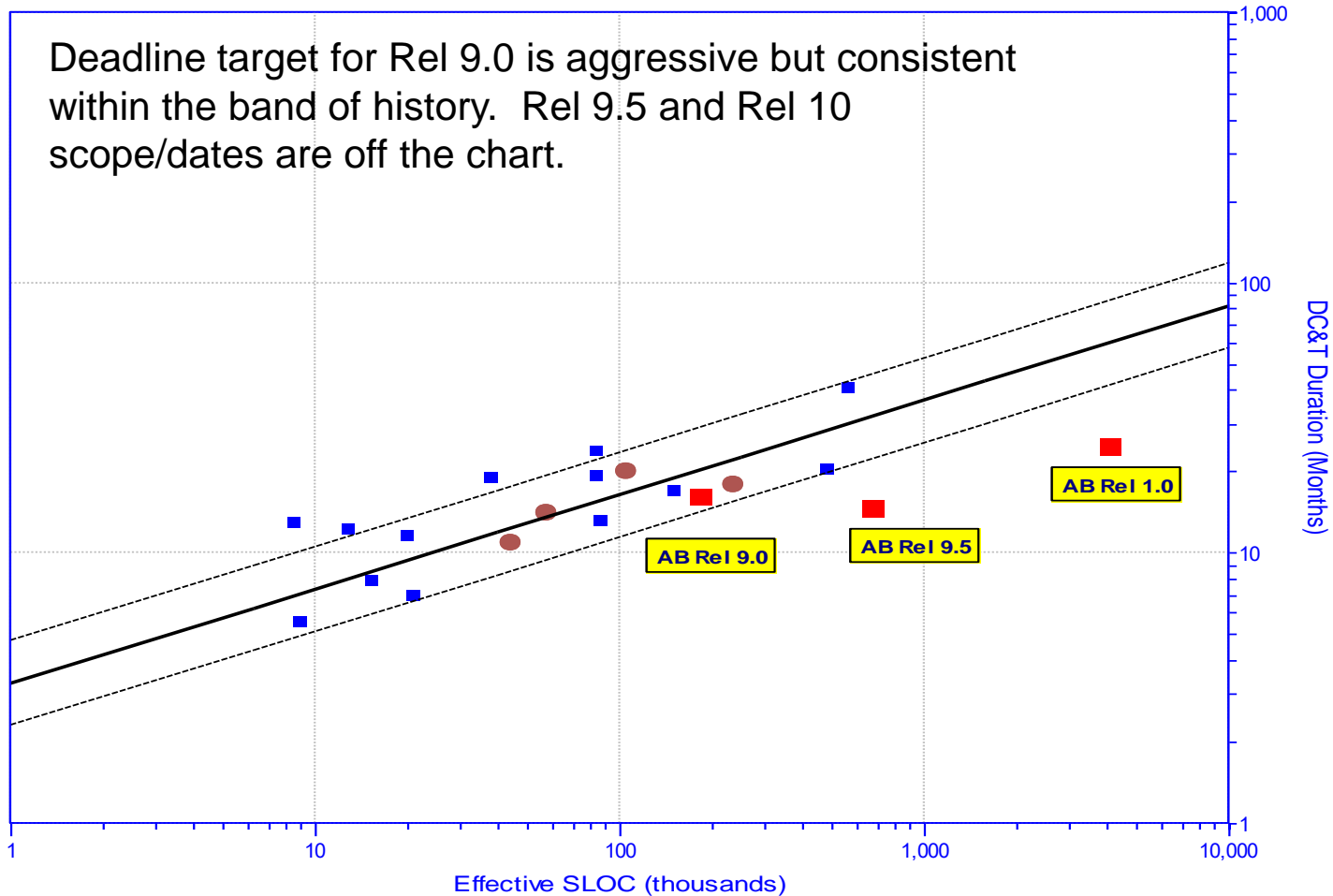|		
21.3	74.8	686
17.0 25.5	59.8 89.7	549 823
PI	Peak Staff	Eff SLOC (K)

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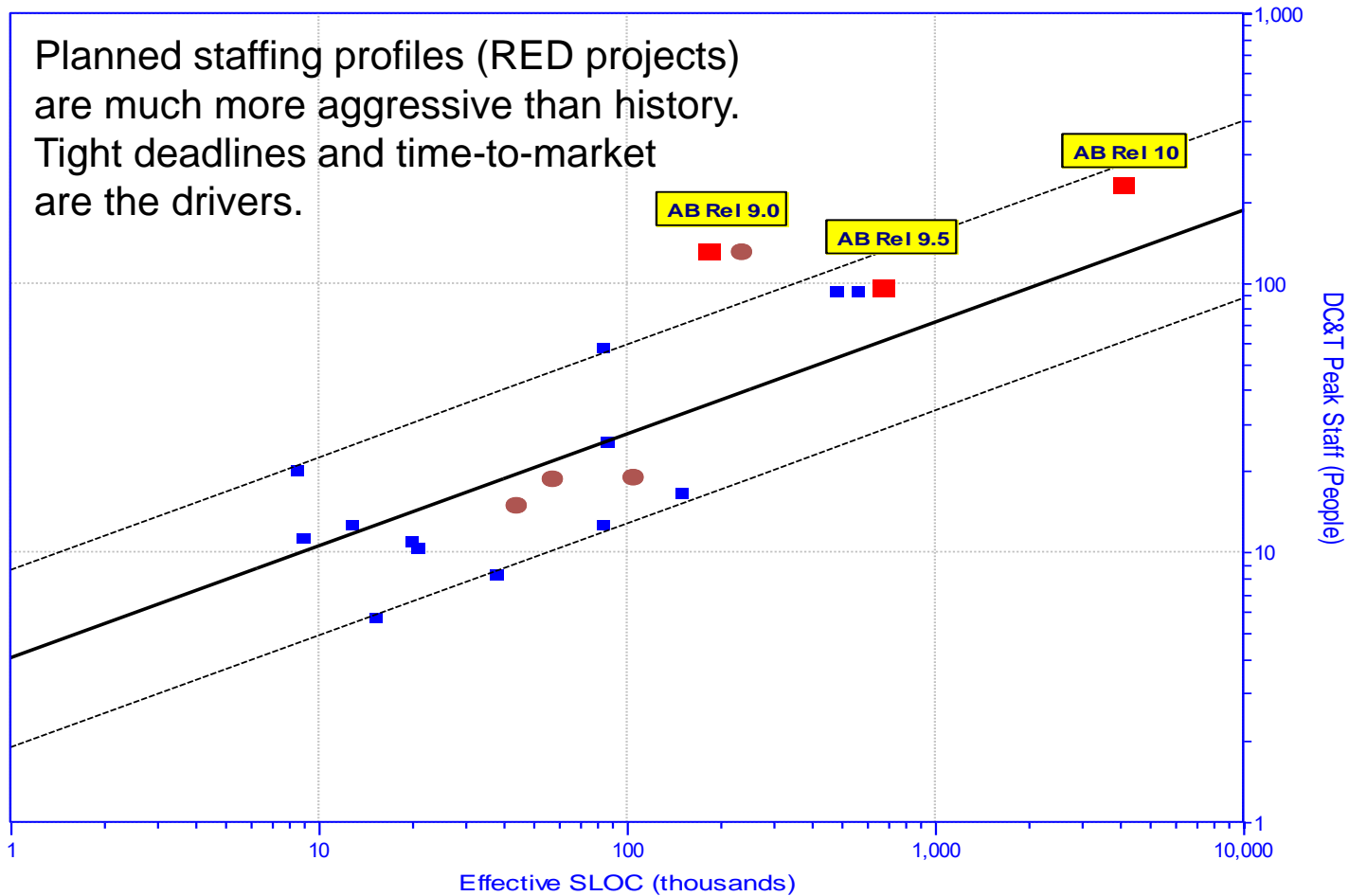# Trendline Assessment – Main Build Schedule

Main Build Phase Schedule vs. Size

Deadline target for Rel 9.0 is aggressive but consistent within the band of history. Rel 9.5 and Rel 10 scope/dates are off the chart.

AB Rel 1.0

AB Rel 9.0

AB Rel 9.5

DC&T Duration (Months)

Effective SLOC (thousands)

■ AB Medical All   ● AB Medical Systems   ■ Special Project   ▬ Company – All Projects   — Avg. Line Style   ------- 1 Sigma Line Style

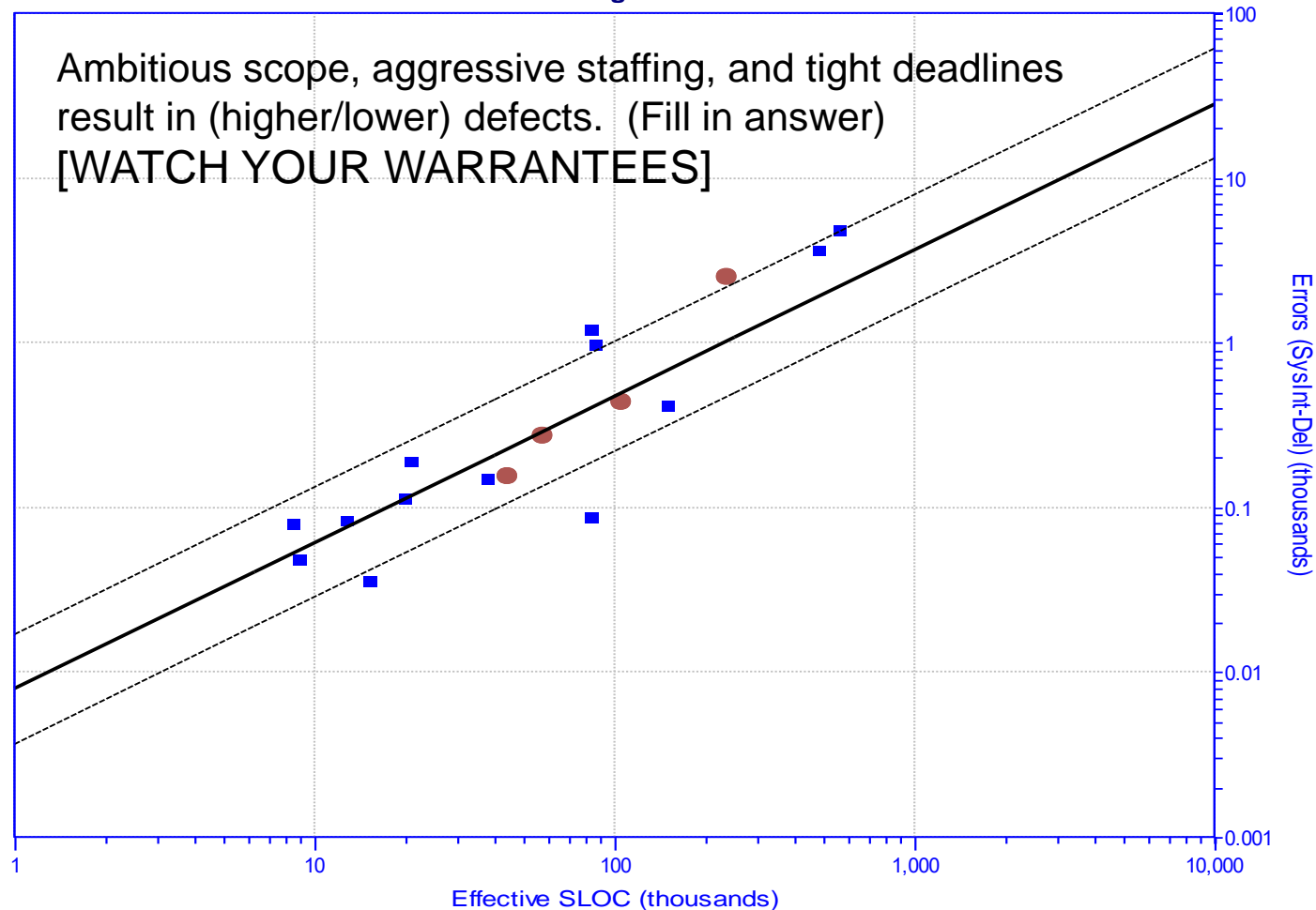# Trendline Assessment – Main Build Staffing

Main Build Phase Staff vs Size

Planned staffing profiles (RED projects) are much more aggressive than history. Tight deadlines and time-to-market are the drivers.

AB Rel 10

AB Rel 9.0

AB Rel 9.5

Legend: AB Medical All | AB Medical Systems | Special Project | Company – All Projects | Avg. Line Style | 1 Sigma Line Style

X-axis: Effective SLOC (thousands)
Y-axis: DC&T Peak Staff (People)

Successful Software Projects

Trendline Assessment – Defects/Quality

Defects During Test vs Size

Ambitious scope, aggressive staffing, and tight deadlines result in (higher/lower) defects. (Fill in answer)
[WATCH YOUR WARRANTEES]

Errors (SysInt-Del) (thousands)

Effective SLOC (thousands)

■ AB Medical All   ● AB Medical Systems   ■ Special Project   ▬ Company – All Projects   — Avg. Line Style   ------- 1 Sigma Line Style

Offshore vs. Industry Average

	Industry Average	Offshore Average	Delta
Project Cost	**$3.5 Million**	**$3.2 Million**	**-$0.3M**
Schedule	**12.6 months**	**9.6 months**	**-3.0 mos**
QA Defects	**242**	**677**	**+280%**
Staffing	**35**	**50**	**+15**

* Normalized to same project size

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Defects vs. Industry Average

Difficult Conversations:

The "*What Happened?*" Conversation

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We Argue about Who's Right

I'm right..

No you're not…
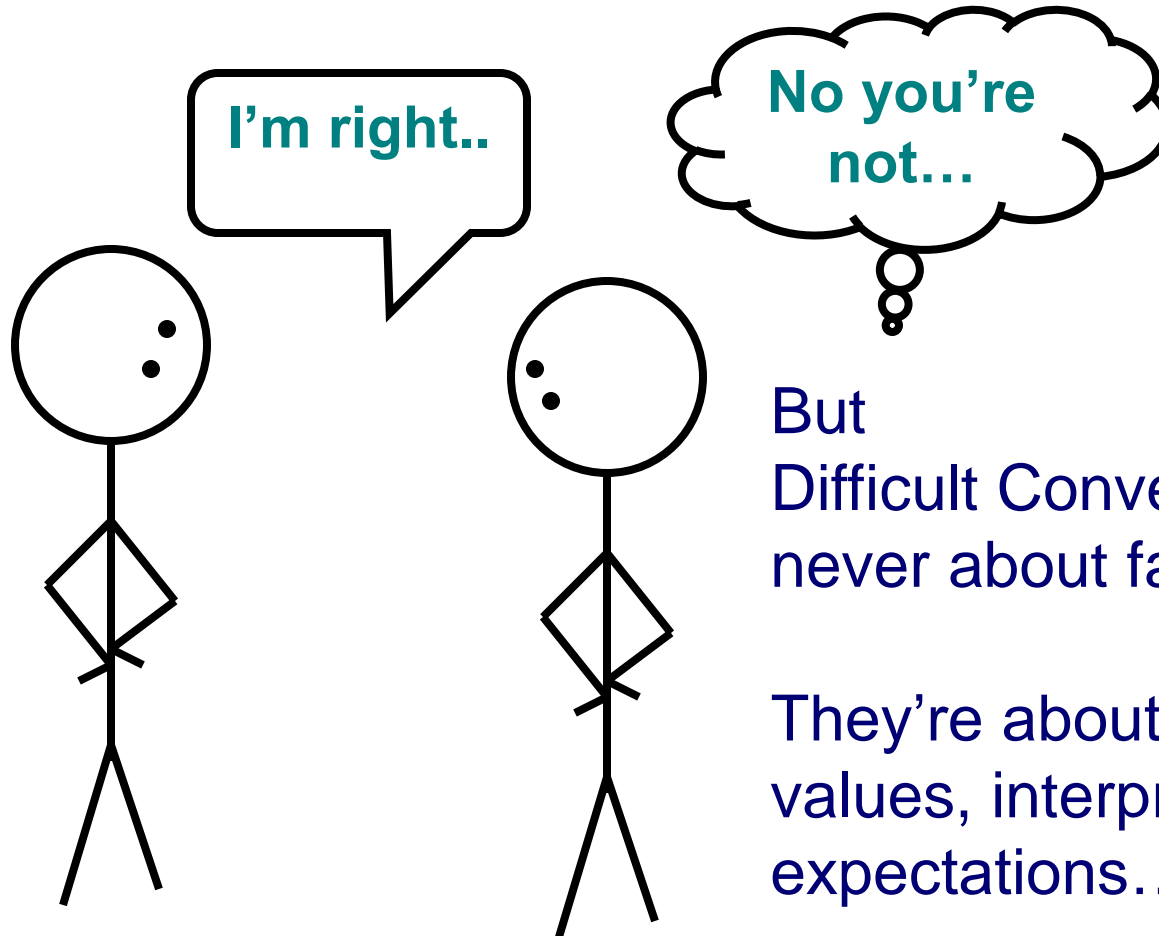
But
Difficult Conversations are never about facts

They're about judgments, values, interpretations, and expectations….

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Costs of Focusing on Blame

We don't learn

We get the problem wrong, so our "solutions" don't work

Relationships are damaged, while the problem stays

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Difficult Conversations:

The *Feelings* Conversation

STEVE FOUND IT HARD TO
EXPRESS HIS FEELINGS

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To Avoid Certain Feelings, We Translate, or "Convert" Them

Common ways:

- **Judgments:** "That's wrong"

- **Characterizations:** "You're stupid"

- **Arguments:** "What makes you think…"

- **Problem Solving:** "Here's the answer…"

Impact? Defensiveness, misunderstandings, poor problem solving, damaged relationships

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Difficult Conversations:

The *Identity* Conversation

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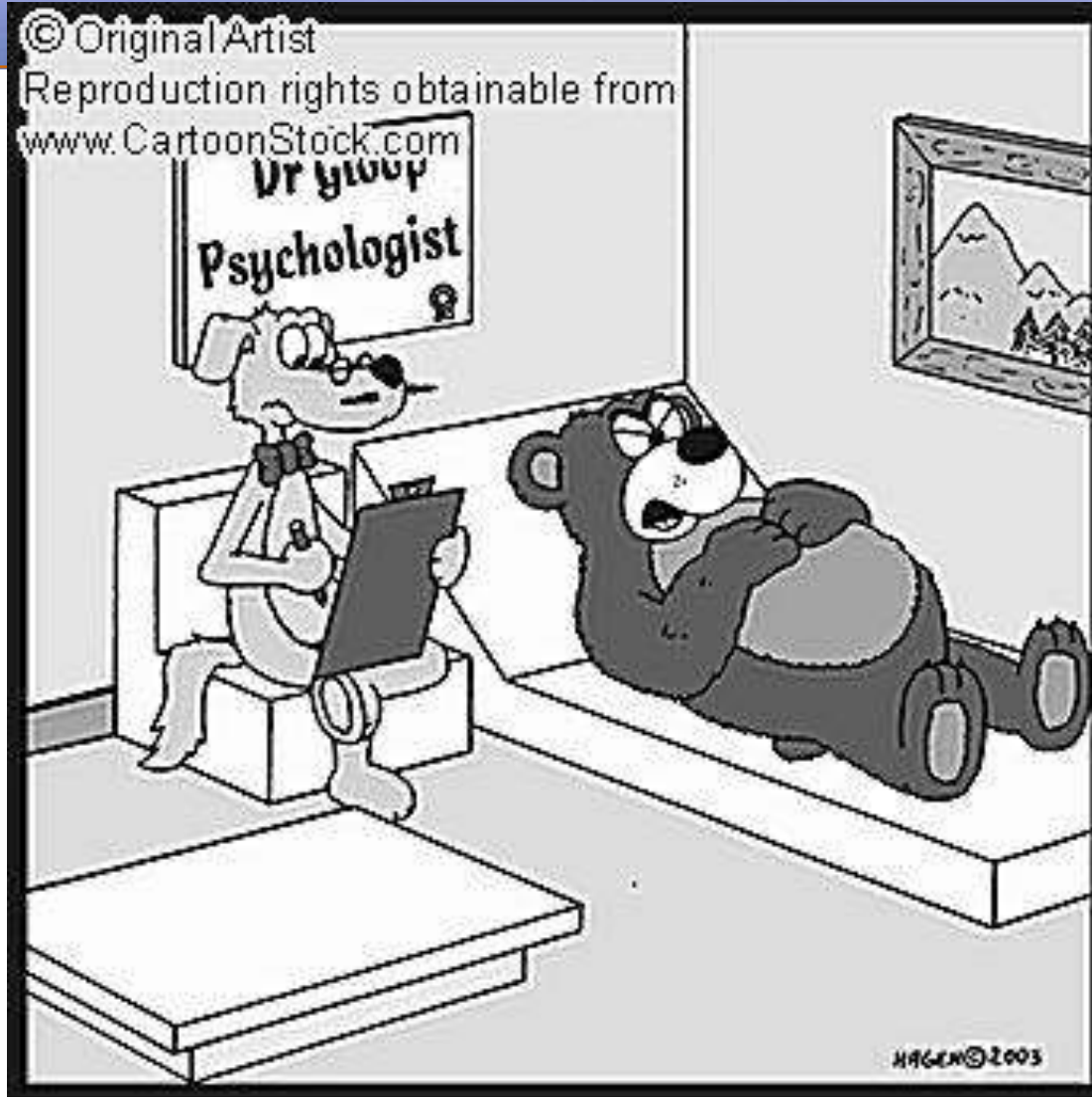
"Gentle Ben"! Sometimes, I wish I could just lash out, but my agent says it would ruin my TV-career...

Clues to Identity Issues

Why is this so hard for me when others seem to handle it easily?

Why do I sometimes lose my balance in the middle of these conversations?

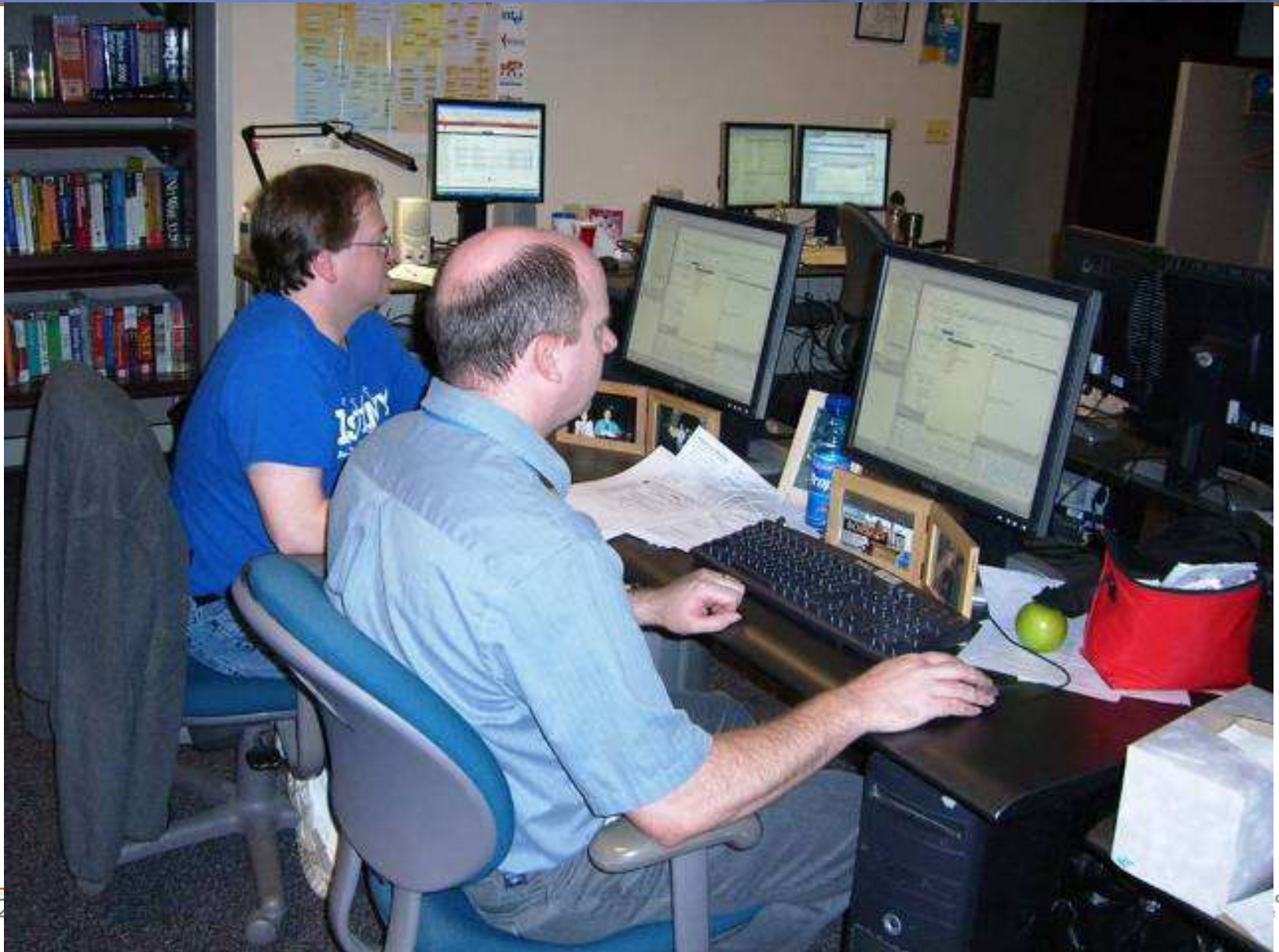Why am I still stuck on what happened yesterday, last week, or last month?

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Identity Triggers

I'm not the kind of person who:

- Makes mistakes
- Is mean
- Can be made fun of
- Hurts someone's feelings
- Is irresponsible
- Is a lousy friend
- Is stupid

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Difficult Agile Conversations

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Successful Software Projects

Projects

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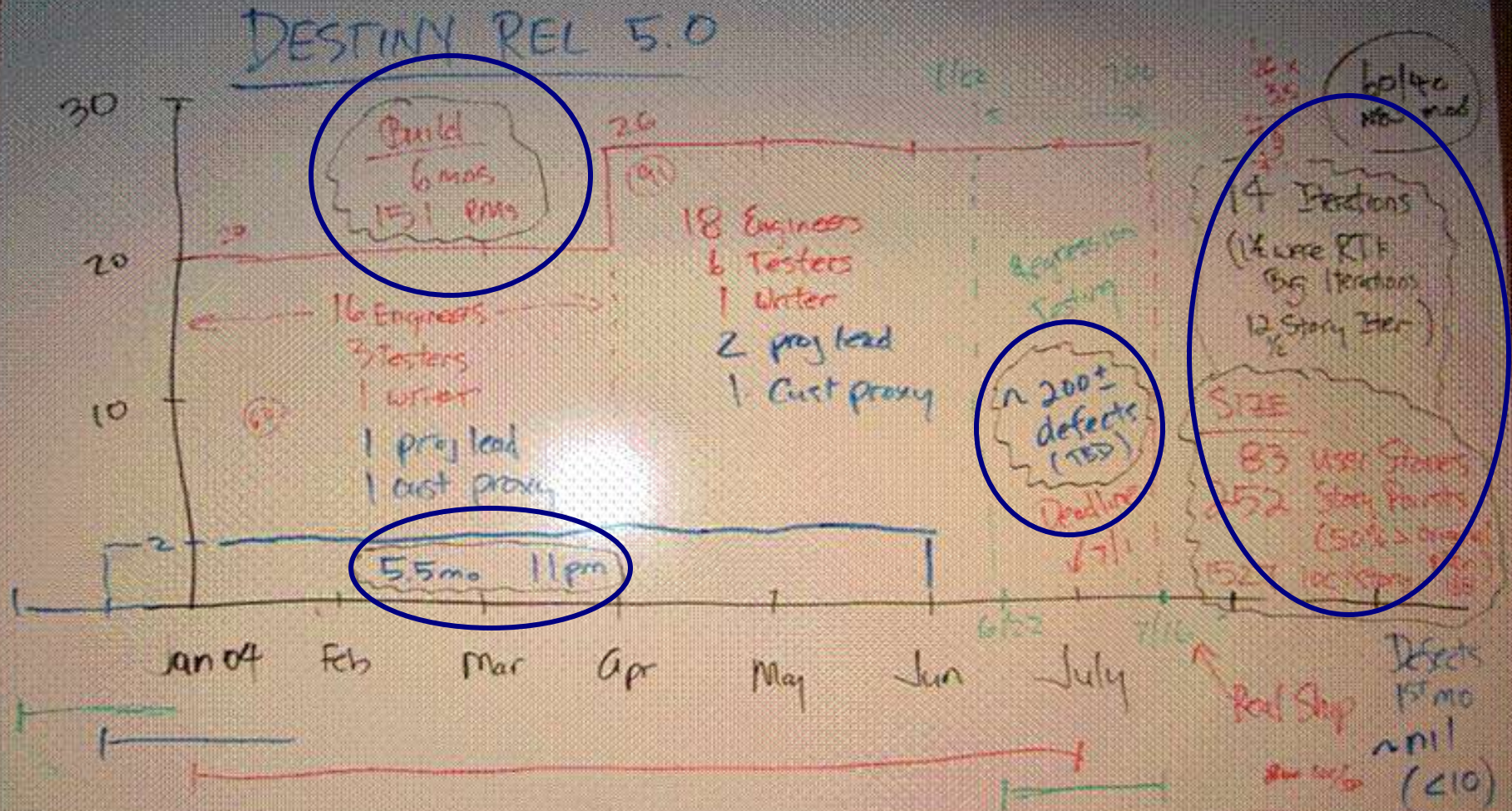
SLIM Model Replica – Destiny 5.0

Staffing & Probability Analysis

How Does This Release Compare Against Industry Data?

STORY
BUILD

Avg Staff (people)
<Destiny Release 5.0>

Milestones
0 - CSR
1 - SRR
2 - HLDR
3 - LLDR
4 - CUT
5 - IC
6 - STC
7 - UAT
8 - FCR
9 - 99R
10 - 99.9R

Oct '03   Nov   Dec   Jan '04   Feb   Mar   Apr   May   Jun   Jul   Aug   Sep
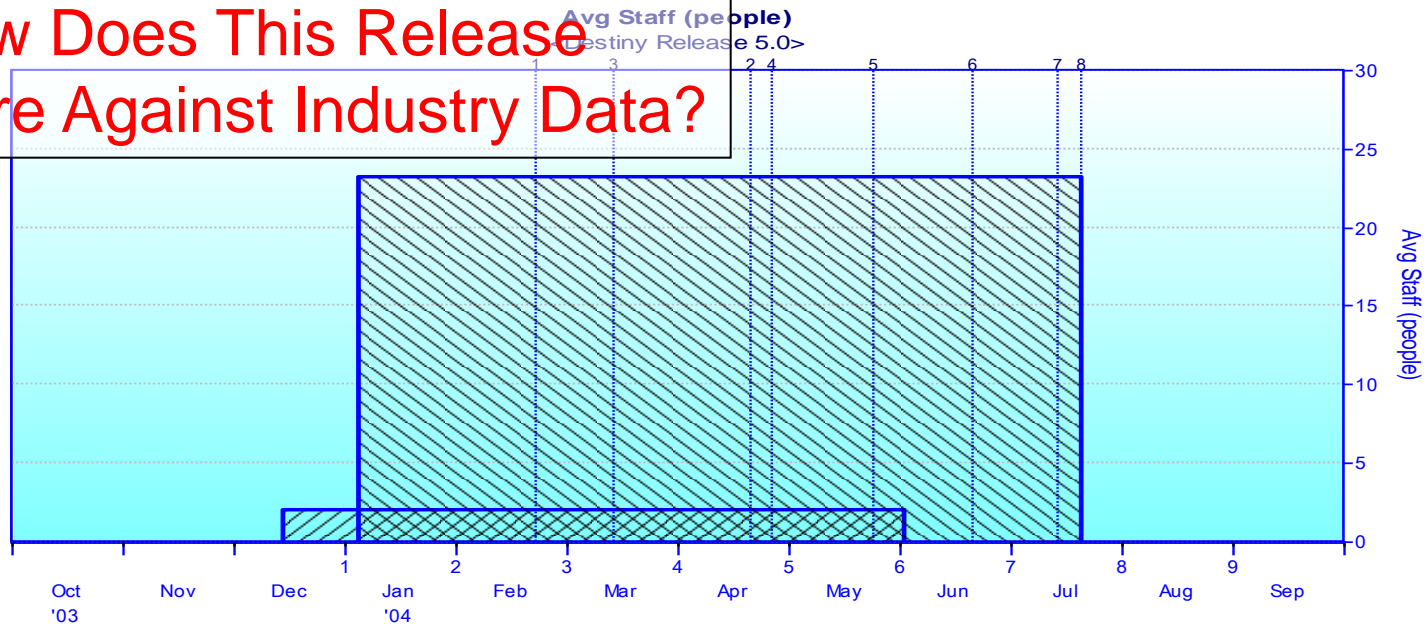
SOLUTION PANEL - <Destiny Release 5.0>

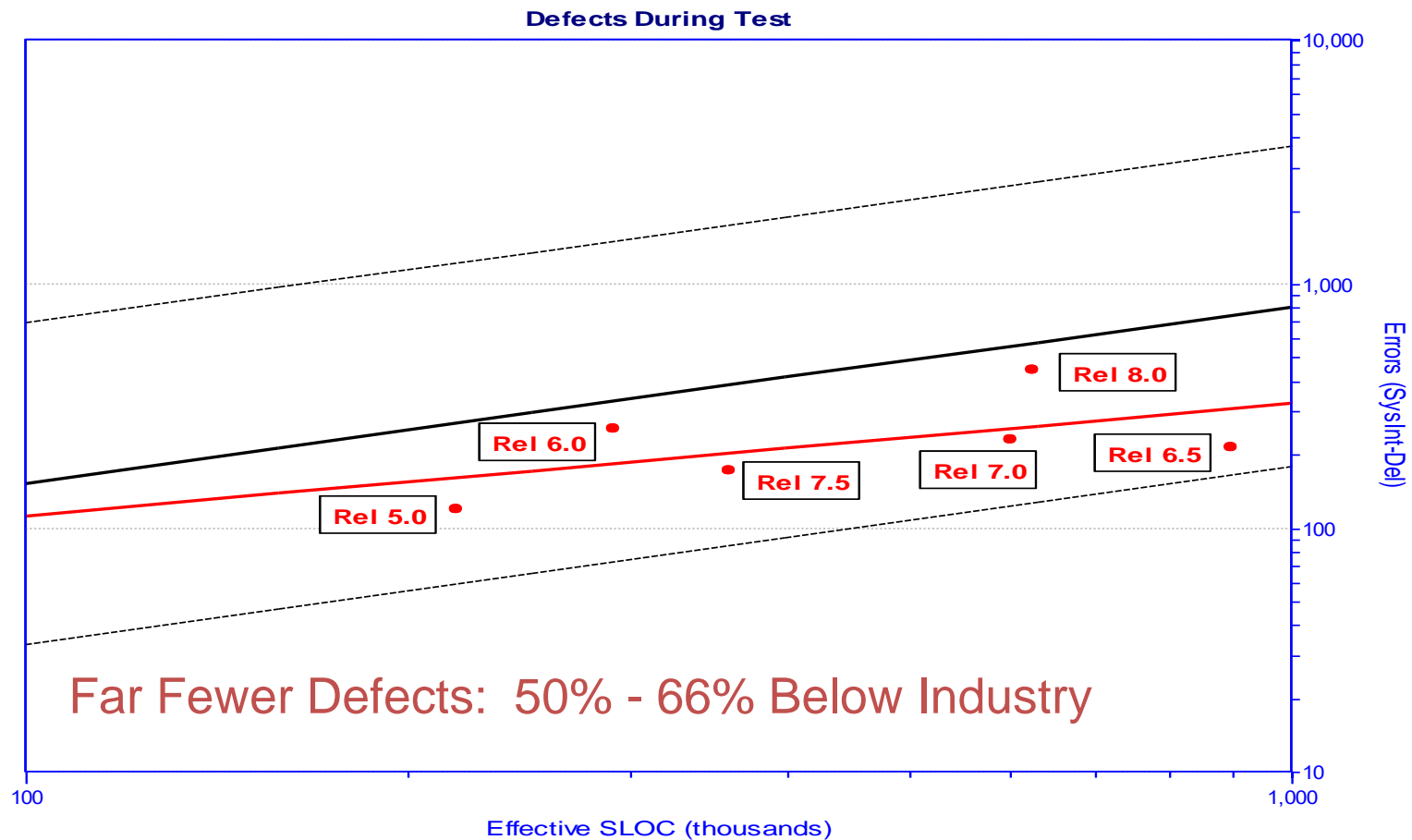|	BUILD	Life Cycle	
Duration	6.5	7.2	Months
Effort	151	162	PM
Cost	1283.5	1377.2	$ (K)
Peak Staff	23.2	23.2	people
MTTD	0.675	0.675	Days
Start Date	1/5/2004	12/15/2003	
PI=23.1	**MBI=5.6**	**Eff SLOC=218,531**	

CONTROL PANEL - <Destiny Release 5.0>

23.1	23.2	219
18.5 27.7	18.5 27.8	175 262
PI	Peak Staff	Eff SLOC (K)
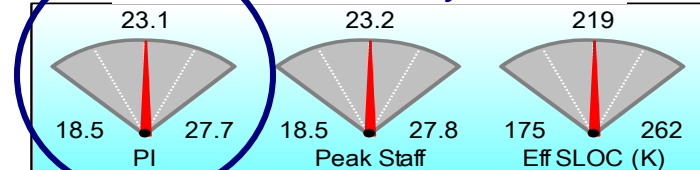
Trendline Assessment – Build Phase Staffing
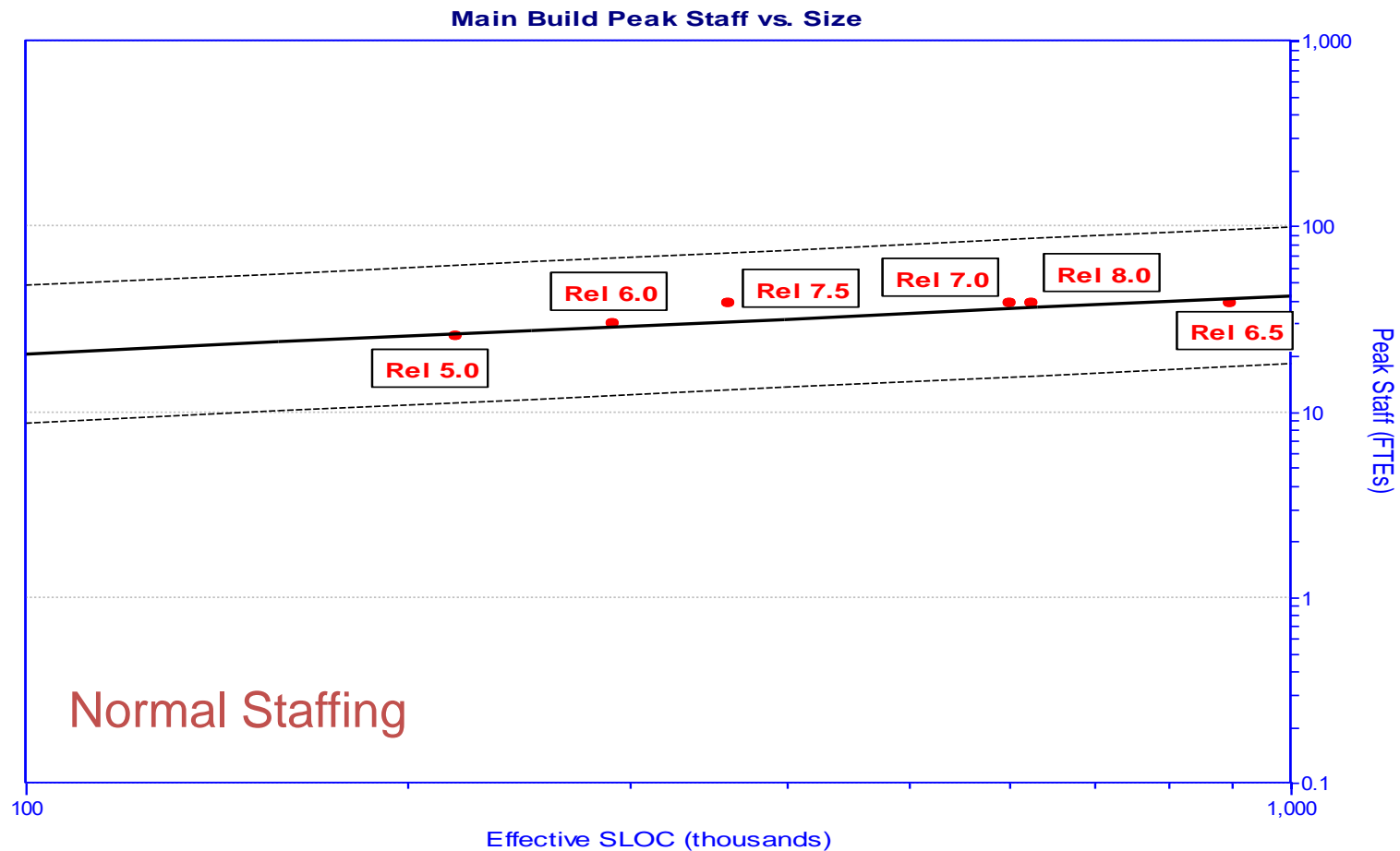
Main Build Peak Staff vs. Size

Rel 5.0
Rel 6.0
Rel 7.5
Rel 7.0
Rel 8.0
Rel 6.5

Normal Staffing

Peak Staff (FTEs)

Effective SLOC (thousands)

| ● Business Systems | ■ Avionic Systems | ● Command & Control | ■ Microcode Systems | ● Process Control | ── QSM 2005 Business |
| ── Avg. Line Style | ------ 1 Sigma Line Style | | | | |

Successful Software Projects

Trendline Assessment – Defects/Quality

Defects During Test

Far Fewer Defects: 50% - 66% Below Industry

Successful Software Projects

Trendline Assessment – Build Phase Schedule

Main Build Phase Duration vs Size

Schedules are Half Industry

Time (Months)

Effective SLOC (thousands)

Rel 5.0
Rel 6.0
Rel 7.5
Rel 7.0
Rel 8.0
Rel 6.5

Business Systems Avionic Systems Command & Control Microcode Systems Process Control QSM 2005 Business
Avg. Line Style 1 Sigma Line Style
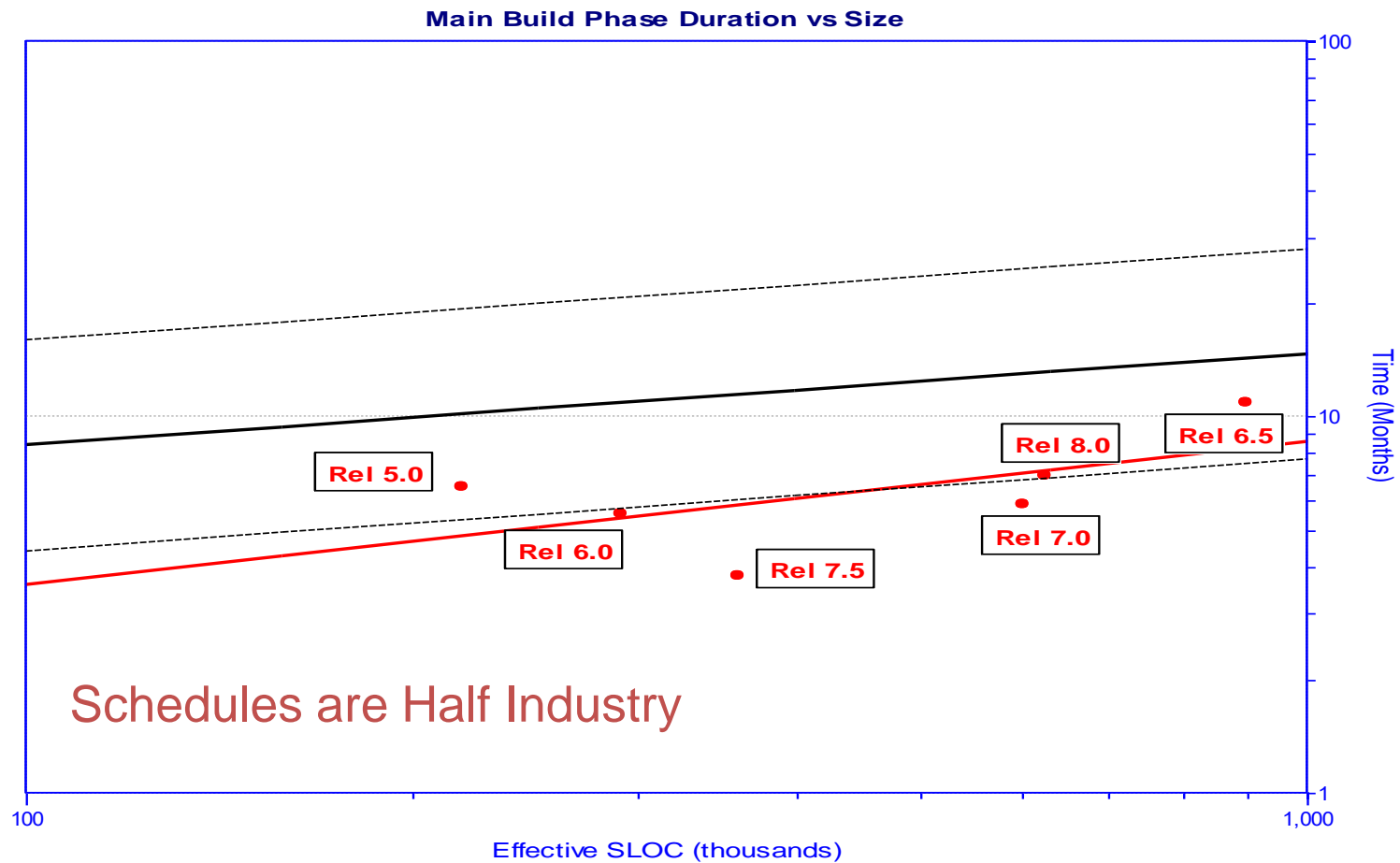
Follett vs. Industry Average

	Industry Average	Current Performance	Delta
Project Cost	$3.5 Million	$2.2 Million	-$1.3M
Schedule	12.6 months	7.8 months	-4.8 mos
QA Defects	242	121	-50%
Staffing	35	35	n/a

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Domain Knowledge

Smart people, experienced people

Coding is moving knowledge from mind into the machine

Inexperience costs money

MASTER OF MY DOMAIN.

Short Feedback Loops

Paired programmers

Instantaneous code reviews

Accelerated learning and execution

Face to face communication channel

Time Boxing

Short iterations

Clear and discernible progress

Anticipation of the next important feature

Efficiency

Avoiding Burnout

XP = Sustainable pace

40 Hour Work Weeks

Prevent productivity collapse for overworked teams

Craftsmanship Over Craft

Take pride in what you do

Do not compromise professionalism

Simple design

Upfront testing

Prevent costly rework

Build it right the first time

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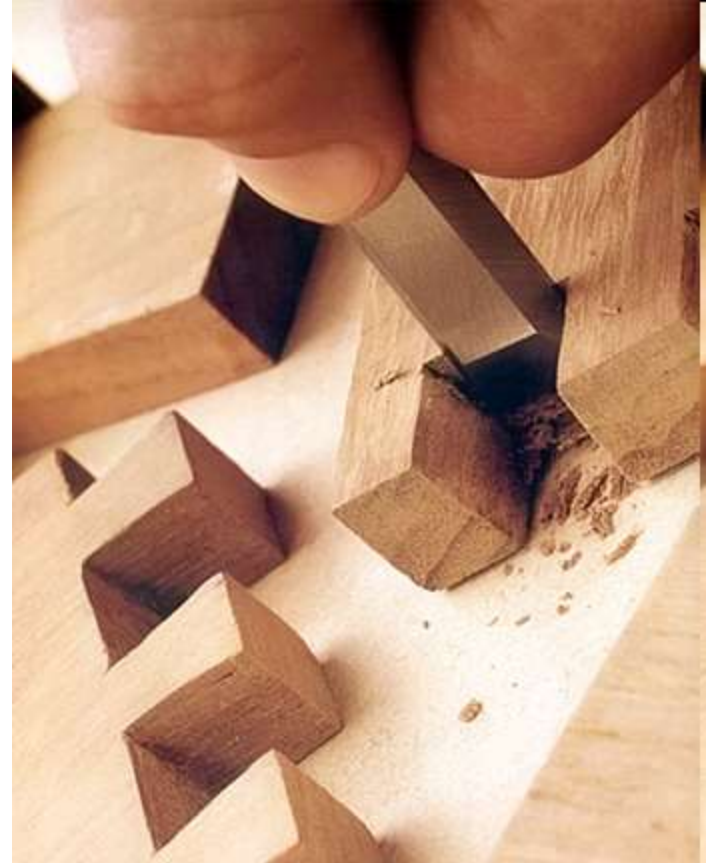
Transparency

"Transparency is a great floodlight. People who thrive in political maneuvering hate SCRUM…"

- Ken Schwaber

High-bandwidth Communication

The best teams have "wide-open pipes"

Domain knowledge moves among the team

Information flows rapidly and accurately

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Avoiding Waste and Costly Rework

Rework has high cost

Rework takes time

Rework creates defects

Rework is bad

Refactoring can be a
  cover up

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Some Practical Advice

Build a Little Less

Take a Little More Time

Get Smart People

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Use Small A-Teams

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Give Them the Best Tools

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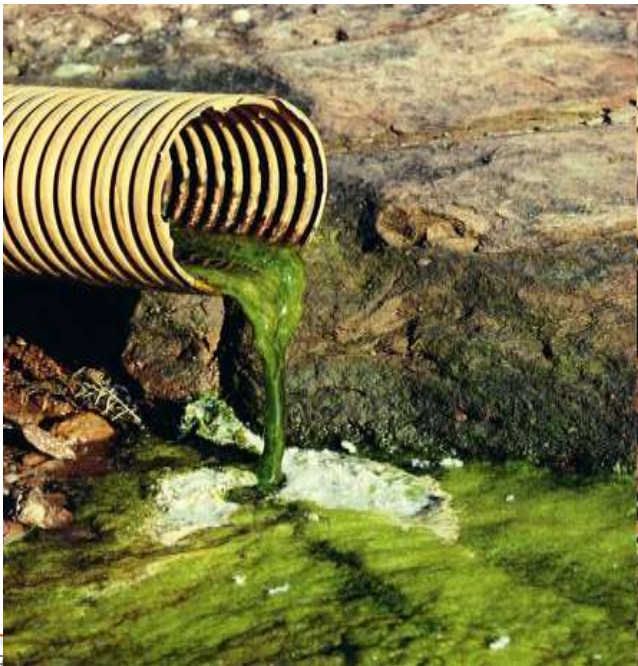
A Global Digital Nervous System

Projects
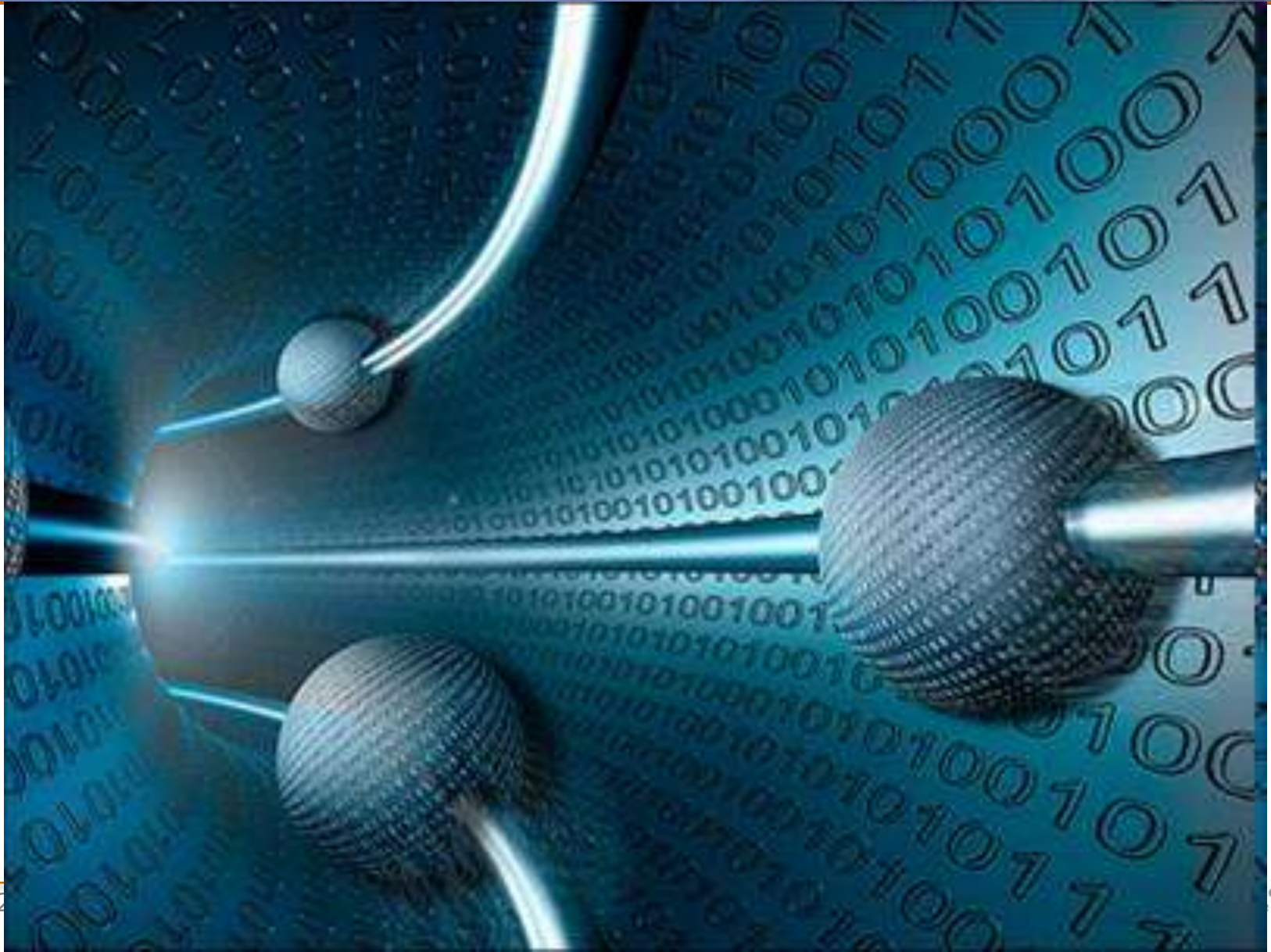
Is The Earth Growing a Brain?
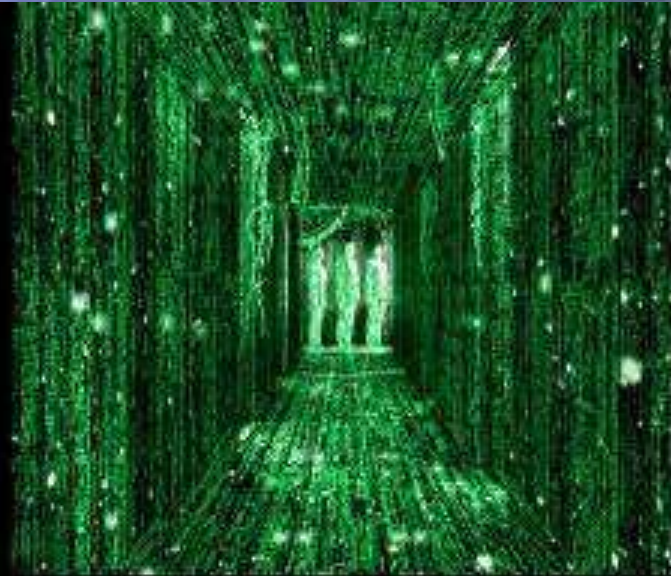
World Population (in billions)
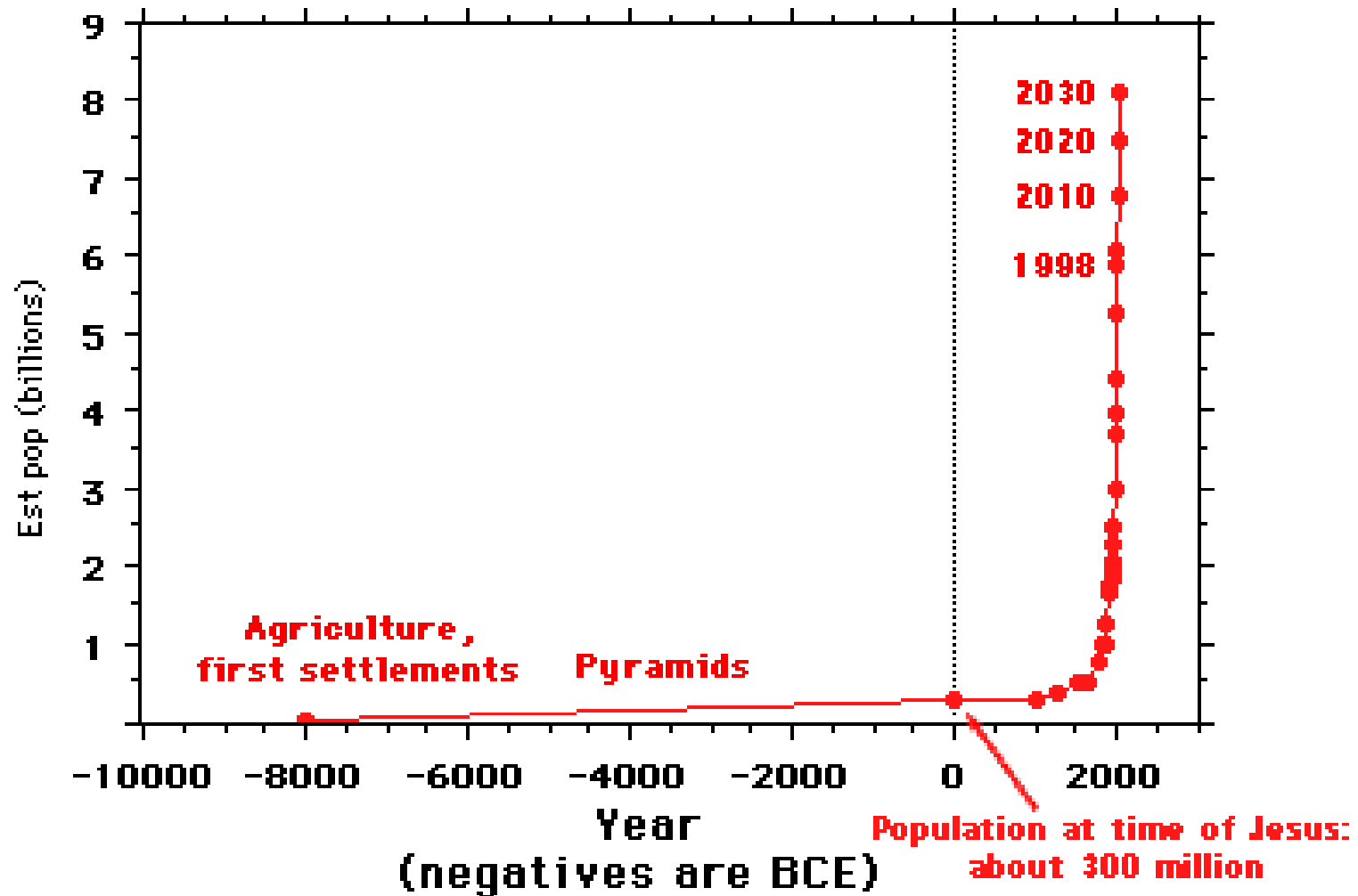
"A fascinating vision of how the information revolution is shifting consciousness. A much-needed, optimistic perspective on humanity's future." —TED TURNER

THE

GLOBAL BRAIN AWAKENS

OUR NEXT EVOLUTIONARY LEAP

PETER RUSSELL

FOREWORD BY MARILYN FERGUSON · Author of the Aquarian Conspiracy

The SLIM-Suite

SLIM-MasterPlan:
Incremental
Development &
Project
Aggregation:
Variance
Analysis
&
Adaptive
Forecasting

SLIM-Estimate:
Size, Schedule,
Cost & Quality
Estimating

SLIM-Metrics:
Industry
Benchmarking
& Process
Improvement

SLIM-DataManager
Software Project Metrics Repository

For Additional Information

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