



Ceregenics

Take-Aways

For data warehousing / business intelligence (DW/BI):

1. The “big up-front” paradigm seems challenged and grievously misallocates resources
2. Solution: Focus upon the true generator of value and optimize outwardly from there
3. The most successful programs also minimize the work required by leveraging new technologies

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Fortune 500 DW/BI Horror Stories

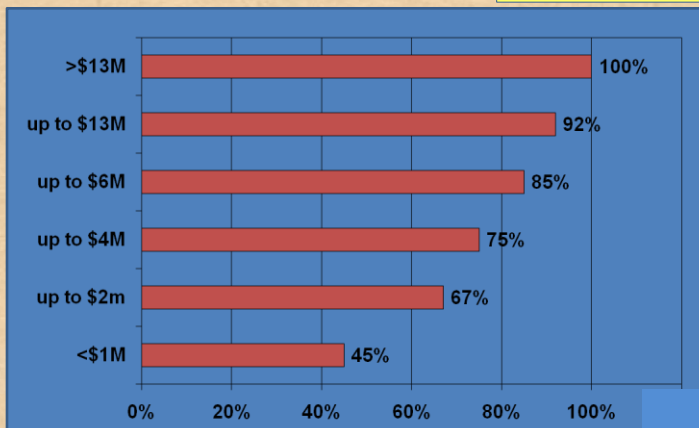
- “Spent 3 years, \$2M, got one report”
- “Our DW/BI project was 150 people for three years...so expensive its hurt our share price”
- “Your ready-to-use enterprise data model will take 2 years to customize and 3 years to build out”
- “Finance wants to fire all 110 of us because our enterprise data modeling consumes 50% of the money and 75% of the time on every project”



Large DW/BI Projects Wade into Swamps

Big-Design-Up-Front Project Track Record

Failure Rates for Waterfall Projects by Size

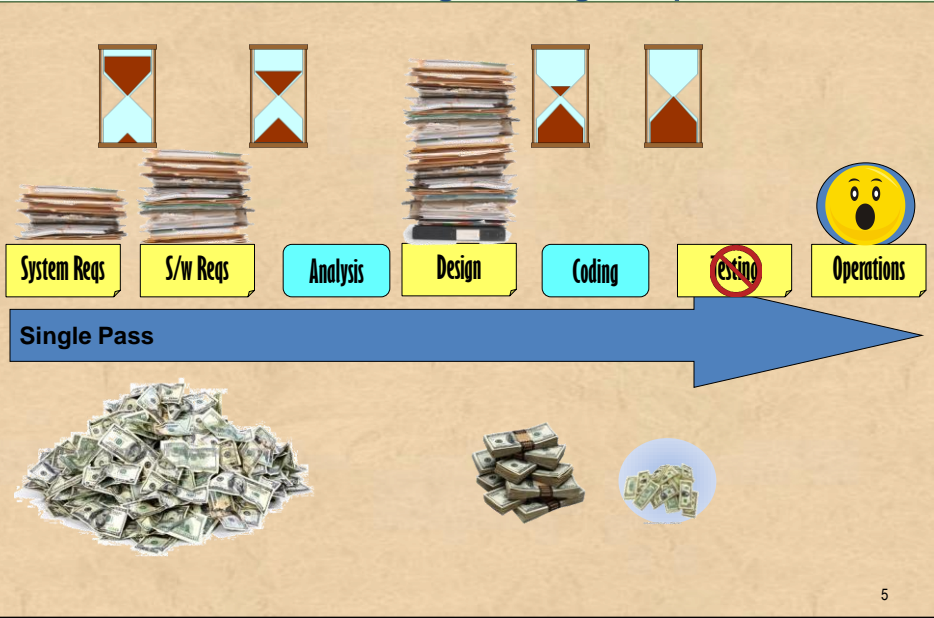


Lesson Learned: Succeed with small teams with small deliverables

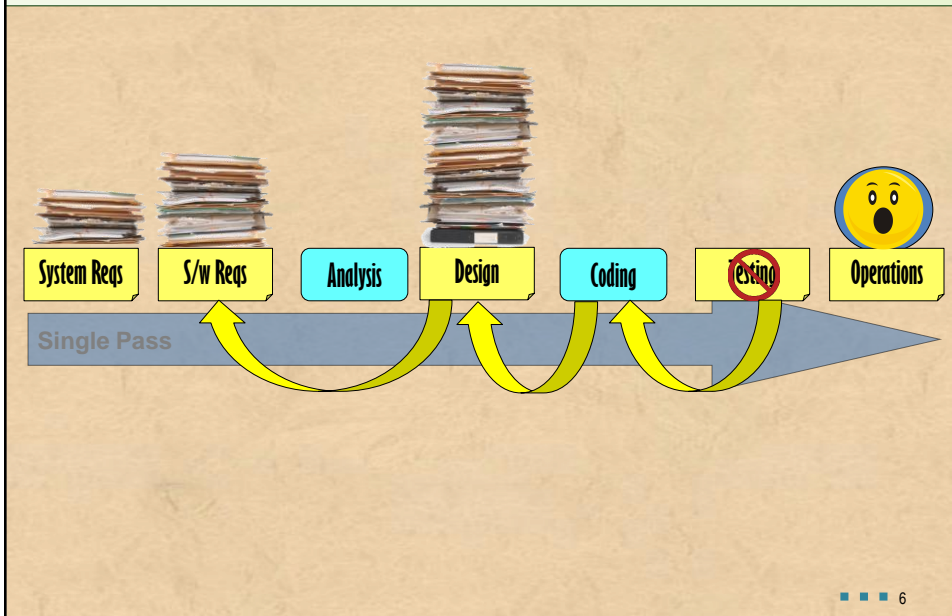
People	Months
500+	36+
250+	24+
40	18
25	12
12	9
6	6

The Standish Group International. 1999. Chaos: A Recipe for Success. "Success" defined as "on time, on budget, all requested features." Dollar amounts adjusted for 2008

The Perils of “Big Design Up Front”



Where Are the “Back Flows”??



Agile Manifesto

We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:

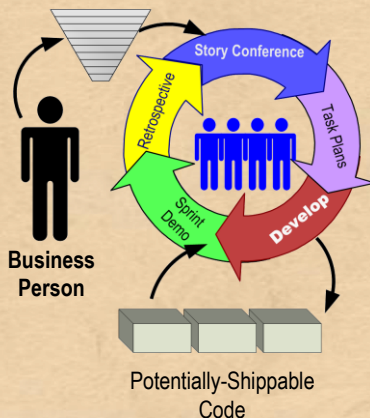
- | | | |
|-------------------------------------|------|---------------------------------|
| Individuals and interactions | over | processes and tools |
| Working software | over | thorough specifications* |
| Customer collaboration | over | contract negotiation |
| Responding to change | over | following a plan |

* originally "comprehensive documentation"

That is, while there is value in the items on the right, we value the items on the left more.

"Maximize the work not done."

The Agile Flywheel



Know what you want
Find out if you're getting it
Change ways until you do

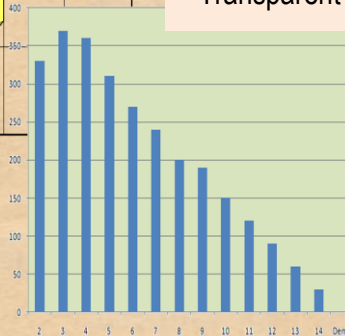
- Small team, regularly delivering a small increment of value
- Put business in direct communication with developers
- Work from a "backlog" of desired functions rather than a huge design
- Have team demonstrate tangible value every 3 to 4 weeks
- Put new version of the application online every two months or so

Keeping Teams on Track

Story by Priority	Tasks Waiting	Tests Written	Under Development	Waiting Validation	Ready to Demo
#1 User needs to: 2 sp		List, Tally, Compars		Code the: 10 hr / 0	Code the: 5 hr / 0
#2 User needs to: 8 sp	Code the: 24 hr	List, Tally, Compars	Code the: 8 hr / 4		
#3 User needs to: 6 sp	Code the: 12 hr	List, Tally, Compars	Code the: 12 hr / 14		

- Light-weight, even paper-based
- Developers can get their own work
- Obvious when extra effort's required
- Transparent to all stakeholders

Task Board



Burndown Chart

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Agile DWBI in Action

- Third-largest U.S. telecom company
- Conformed, enterprise dimensions
- Revenue, expense, and margin facts
- Four master-data elements
- Three teams over a period of two years



Agile DWBI in Action

- Regional phone company: **speed ↑ x3, cost ↓ x2**
- Major Federal Government institution: **speed ↑ x20, cost ↓ x40**
- Major PC manufacturer
- Major software company
- Major discount retailer
- Regional development service provider



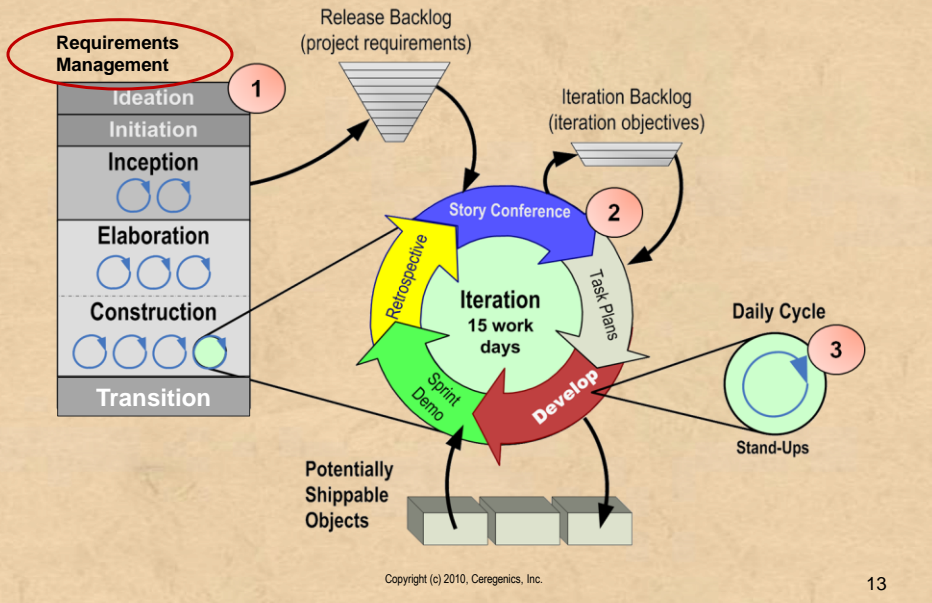
11

What About....?

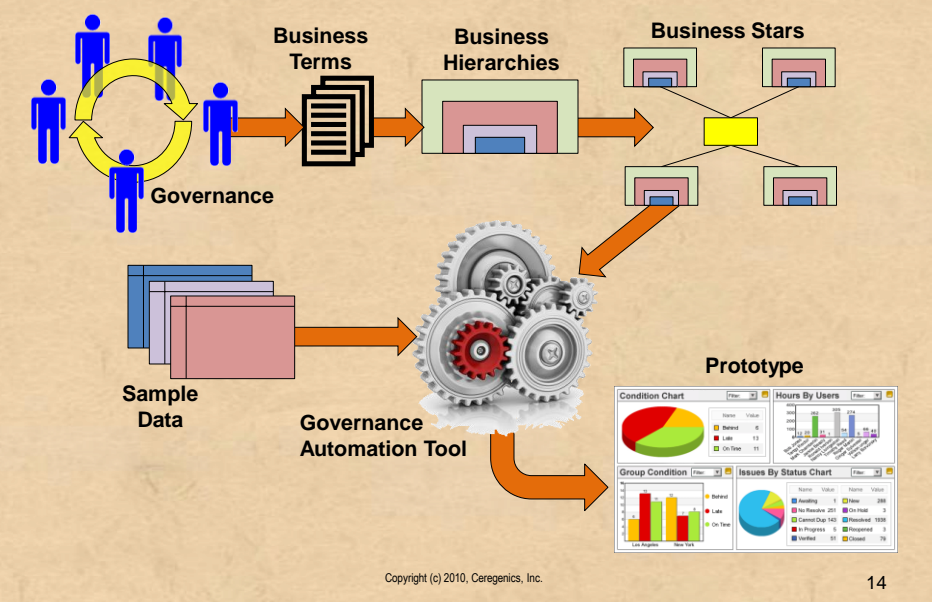
1. Analysis & design?
2. Architecture?
3. Controlling Scope?
4. Fix-bid or data-driven projects?
5. Quality control?
6. Scaling for multi-projects?
7. Remote team members?
8. Silo-ed organizations?



Flywheel & Supporting Processes

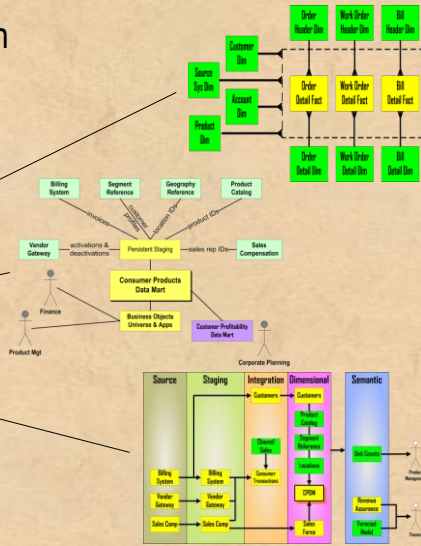


Accelerating "Define & Design"

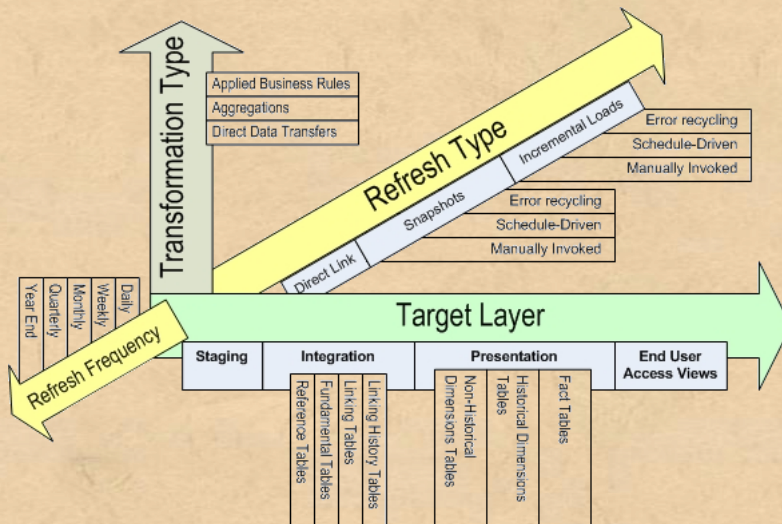


Vision Document

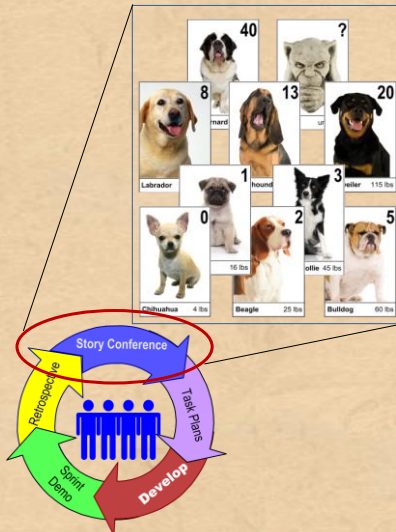
- Consolidated user points-of-pain (“problem statements”)
- List of key features
- Conceptual data model
- Context diagram
- High-level architecture



Back-End Epic Decomposition



Agile Estimating



- Every story conference: size-based estimation of business' functional requests
- Validated by task planning's labor hour estimates
- Confirmed in three weeks with actual performance numbers
- Gets the team good at estimating, and keeps them good at it

Good Estimating → Accurate Plans

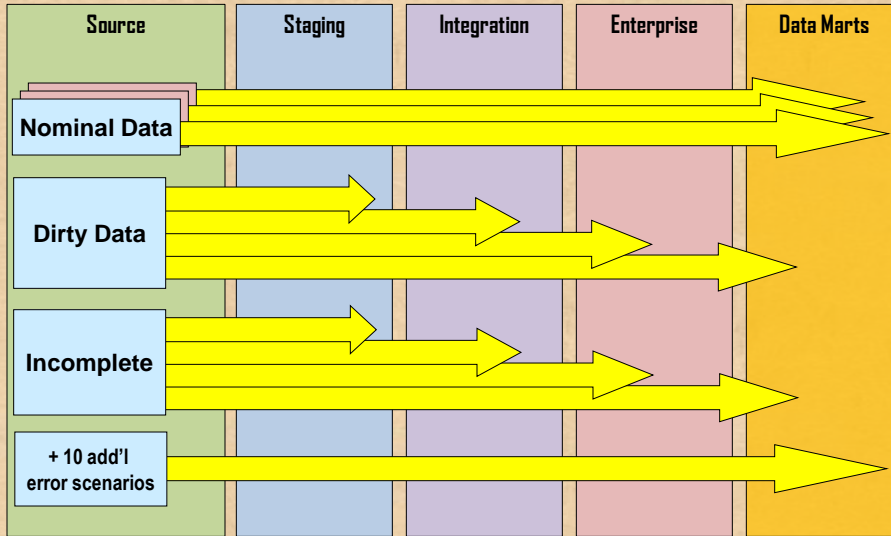
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8	CMG	OE	CRDES	Cust-Accts ad hoc	20	8	1	40
7	CMG	OE	WRDES	Cust-Accts ad hoc	20	13	2	26
21	CMG	WO	WRWO	Product ad hoc	20	3	2	26
41	BMG	Rev	CRIS	Product ad hoc	20	13	2	26
42	BMG	Rev	ORIS	Product ad hoc	20	3	2	26
50	BMG	WO	CRSA	Xactn ad hoc	40	8	1	39
51	BMG	WO	ORSA	Xactn ad hoc	40	5	1	39
58	BMG	OE	CRDS	Xactn ad hoc	40	5	1	39
59	BMG	OE	ORDS	Xactn ad hoc	40	13	1	39
61	WMG	OE	ProTrac	Xactn KPls	20	8	2	39
57	BMG	OE	OROS	Xactn KPls	20	13	3	39
54	CMG	OE	CRDES	Xactn KPls	20	5	3	39
4	BMG	WO	CRSA	Cust-Accts ad hoc	13	13	3	41
13	WMG	OE	ConTrac	Cust-Accts ad hoc	13	8	3	41
19	WMG	Rev	ConTrac	Cust-Accts ad hoc	13	5	4	41
46	CMG	WO	CRWO	Xactn KPls	13	5	4	41
62	CMG	Rev	WRBS	Xactn KPls	13	8	4	41
13	WMG	OE	ProTrac	Cust-Accts ad hoc	8	5	4	41
15	CMG	Rev	CRBS	Cust-Accts ad hoc	8	5	4	41
16	CMG	Rev	ERBS	Cust-Accts ad hoc	8	13	4	41
18	BMG	Rev	ORIS	Cust-Accts ad hoc	8	3	5	40
23	CMG	WO	ERWO	Product ad hoc	8	8	5	40
24	BMG	WO	CRSA	Product ad hoc	8	13	5	40
36	WMG	OE	ConTrac	Product ad hoc	8	13	5	40
45	CMG	WO	WRWO	Xactn KPls	8	3	5	40
47	CMG	WO	ERWO	Xactn KPls	8	5	6	39
49	BMG	WO	ORSA	Xactn KPls	8	3	6	39
60	WMG	OE	ConTrac	Xactn KPls	8	8	6	39
64	CMG	Rev	ERBS	Xactn KPls	8	3	6	39
1	CMG	WO	WRWO	Cust-Accts ad hoc	5	5	6	39
2	CMG	WO	CRWO	Cust-Accts ad hoc	5	5	6	39
5	BMG	WO	ORSA	Cust-Accts ad hoc	5	5	6	39
22	CMG	WO	CRWO	Product ad hoc	5	5	6	39

Rel 1

Rel 2

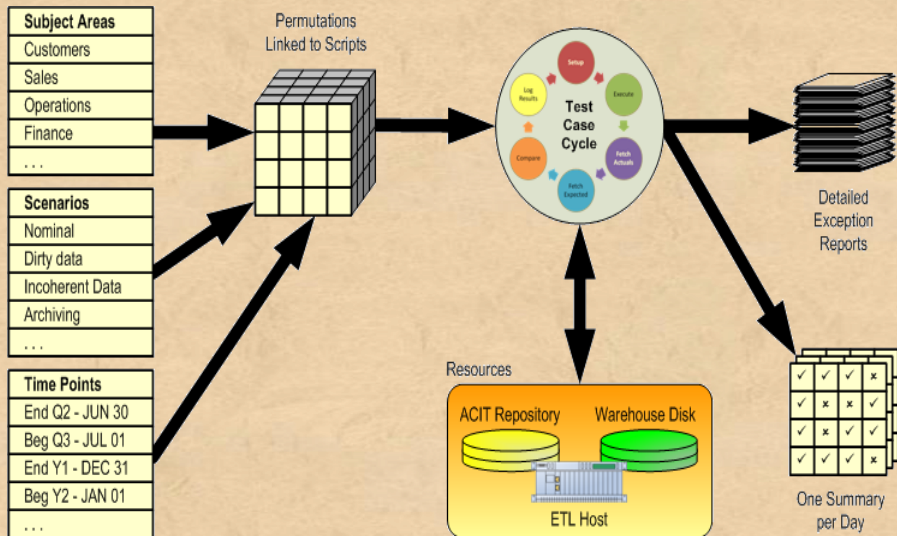
- After a couple of iterations, team estimates all functional requests
- Brackets items by team's proven velocity
- Can now see what will be delivered and when
- Project LOE estimate becomes simple: (head count) x (# iterations)
- Re-visited after each iteration

Leveraging Agile DW/BI Tools



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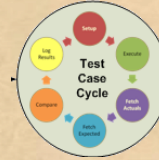
Automated Testing: Scenario Cycle



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Automated QA Drives Teams Agile

Iteration 1 Demo Day



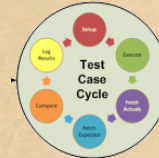
(animated grid)

A subset now lit green for "success"

Topic	Staging	Integration	Enterprise	Marts
Individuals Dim	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Partner Agencies Dim	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Remedies Dim	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Staff Dim	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Application Fact	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Court Action	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Outcomes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Automated QA Drives Teams Agile

Iteration 2 Demo Day



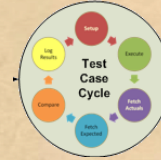
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A larger subset now lit green for "success"

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Partner Agencies Dim	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Remedies Dim	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Staff Dim	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Application Fact	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Court Action	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Outcomes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Automated QA Drives Teams Agile

Iteration 3
Day 10

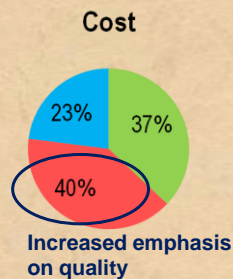
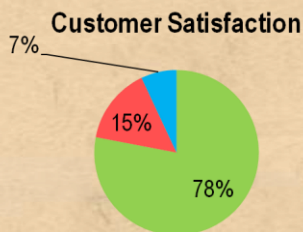
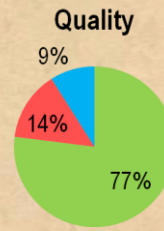
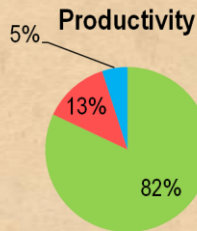


(animated grid)

One green turns red...the last update broke something that worked the day before

Topic	Staging	Integration	Enterprise	Marts
Individuals Dim	●	●	●	●
Partner Agencies Dim	●	●	●	●
Remedies Dim	●	●	●	●
Staff Dim	●	●	●	●
Application Fact	●	●	●	●
Court Action	●	●	●	●
Outcomes	●	●	●	●

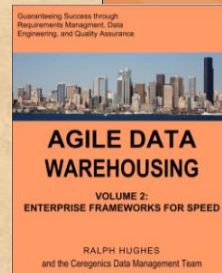
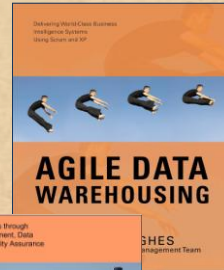
Agile Benefits: Faster, Better, Cheaper



■ Improved
■ No Change
■ Worsened

Recap

1. The “big up-front” paradigm seems challenged and grievously misallocates resources
2. Solution: Focus upon the true generator of value and optimize outwardly from there
3. The most successful programs also minimize the work required by leveraging new technologies



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Q&A

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