

### **Agenda of Talk**

THE STANDISH GROUP

- Review of CHAOS Research
- Overview of ROI
- Your Project
- · SACWIS Florida vs. Minnesota
- ROI Questions

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#### **CHAOS Research**

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- Scope of Application Software Development Project Failures
- Major Factors that Cause Software Projects to Fail
- Key Ingredients that Can Reduce Project Failures
- Internally Funded -- Pure Research

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### **Methodology**

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- Started in 1994
- Research over 35,000 AD projects
- Surveys
- Focus Groups
- Personal Interviews
- Group Therapy Sessions
- CHAOS University®
- Other Studies

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# What Happens to AD Projects?

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- Success
  - Project is Completed On-time, On-budget, and with Most of the Features & Functions
- Challenged
  - Project is Completed Over-budget, Overtime, and/or with Fewer Features & Functions
- Impaired
  - Canceled & Unused

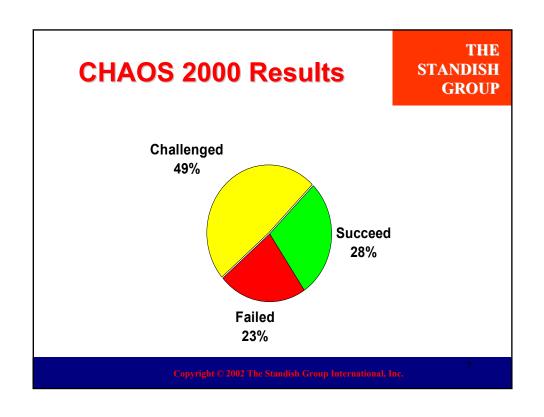
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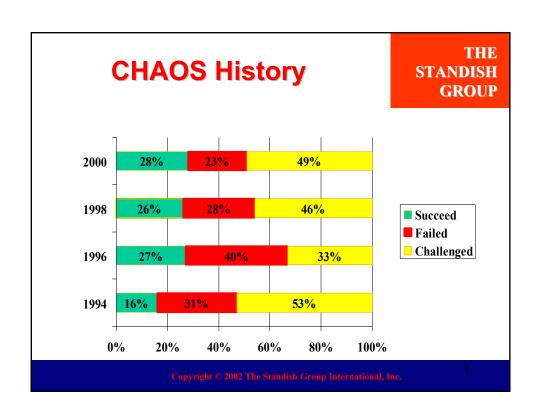
## **Types of Projects**

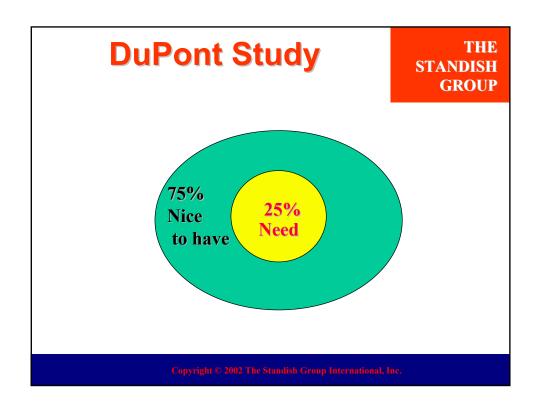
THE STANDISH GROUP

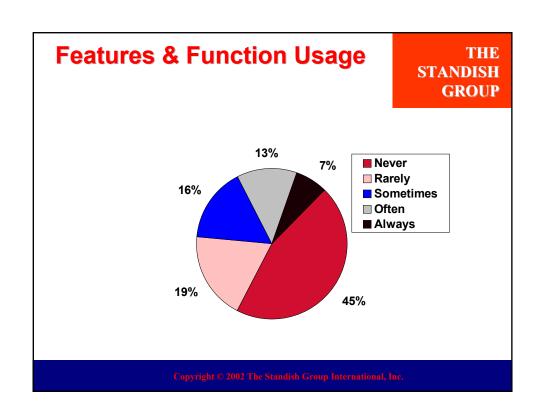
Developed from scratch using traditional languages and methods	33%
Purchased application & modified	15%
Developed from scratch using an object model	13%
Developed some components & purchased others	13%
Purchased application & modified extensively	12%
Purchased components & assembled the application	9%
Purchased application & performed no modifications	5%

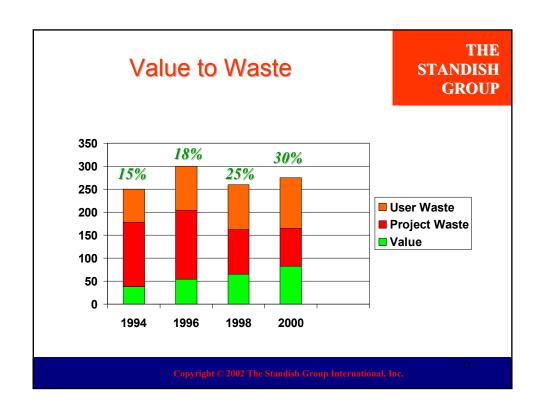
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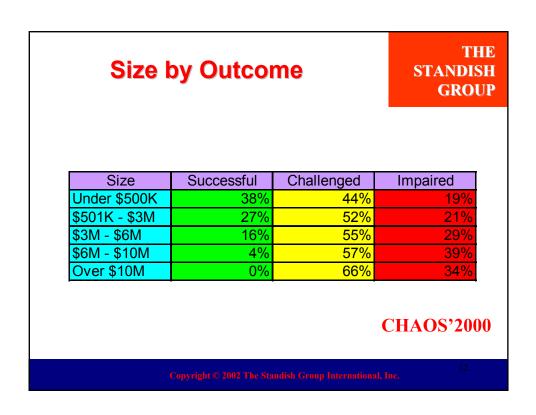












### **Success by Size**

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Size	Successful	
Under \$500K	68%	
\$501K - \$3M	22%	
\$3M - \$6M	9%	
\$6M - \$10M	1%	
Over \$10M	0%	
Total	100%	
	CHAOS	2000

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#### **TOP 10 Reasons for Success**

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<b>Executive Support</b>
User Involvement

**Experienced Project Manager** 

Clear Business Objectives

Minimized Scope

Standard Infrastructure

Firm Basic Requirements

Formal Methodology

Reliable Estimates

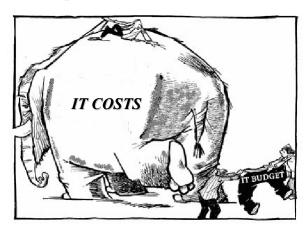
Skilled Staff

**CHAOS 2000** 

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At CHAOS University - 20%

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#### ROI?

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- Return On Investment
- Risk Of Investment
- Resumé Once Impaired
- Replace Old Intellect



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#### **ROI = Return On Investment**

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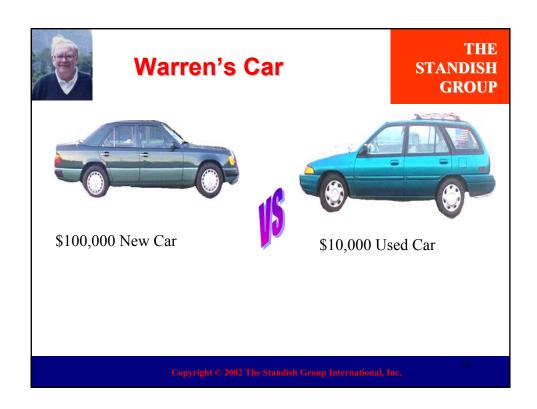
Warren Buffet

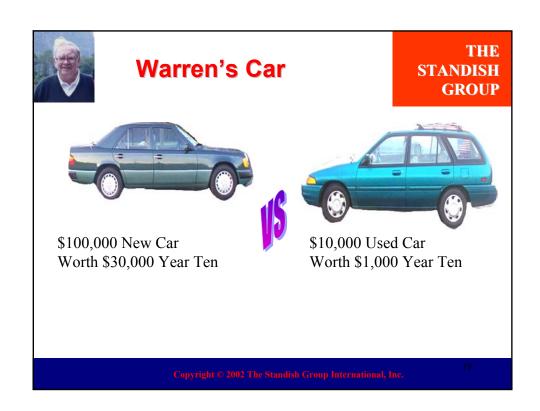
Erik Brynjolfsson

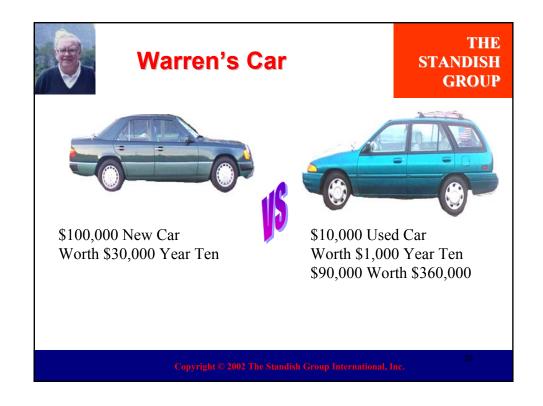


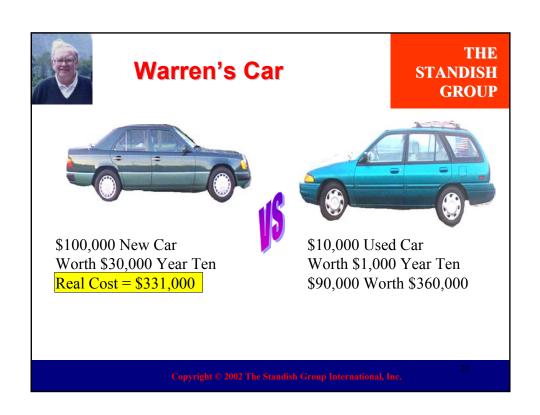
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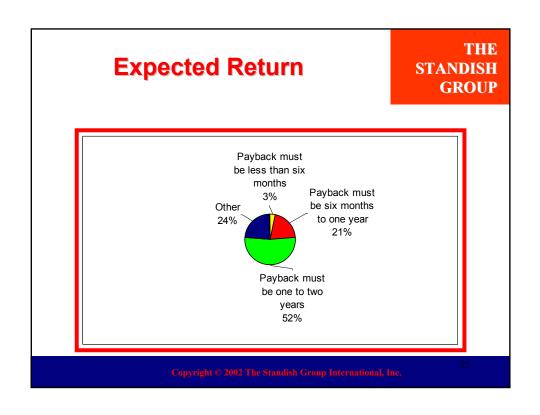


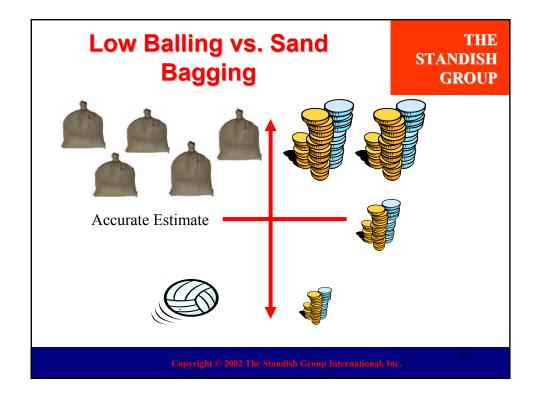


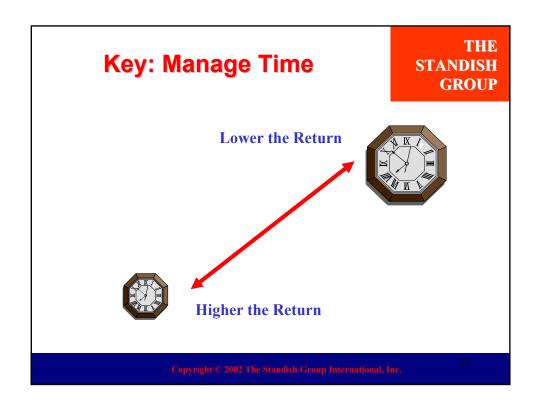












### **Simple ROI**

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Your Project is #3 & Company has total project budget of \$4M

Cost	Project 1		Pi	roject 2	Project 3		
Manpower	\$	500	\$ 2,000		\$	2,500	
Other Cost	\$	500	\$	500	\$	500	
Total	\$	1,000	\$	2,500	\$	3,000	

Savings/Revenue	1,000	2,000	2,000
Payback/Months	12	15	18

Project Months	6	12	24
	_		

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#### THE STANDISH GROUP

Months	1 to 6	7 to 12	13 to18	19 to 24	25 to 30	31 to 36	Total	Net
Project 1 - Cost	\$500	\$ 500	0	0	0	0	\$1,000	2.5
Project 1 - Return		\$500	\$500	\$500	\$500	\$ 500	\$2,500	\$1,500
Project 2 - Cost	\$1,000	\$1,000	\$ 500	0	0	0	\$2,500	1.6
Project 2 - Return			\$1,000	\$1,000	\$1,000	\$1,000	\$4,000	\$1,500
Project 3 - Cost	875	875	875	750	500	0	\$3,000	0
Project 3 - Return					\$1,500	\$1,500	\$3,000	\$0

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## **Simple ROI - 3 Years**

THE STANDISH GROUP

Months	1 to 6	7 to 12	13 to18	19 to 24	25 to 30	31 to 36	Total	Net
Project 1 - Cost	\$500	\$ 500	0	0	0	0	\$1,000	2.5
Project 1 - Return		\$500	\$500	\$500	\$500	\$ 500	\$2,500	\$1,500
Project 2 - Cost	\$1,000	\$1,000	\$ 500	0	0	0	\$2,500	1.6
Project 2 - Return			\$1,000	\$1,000	\$1,000	\$1,000	\$4,000	\$1,500
Project 3 - Cost	875	875	875	750	500	0	\$3,000	0
Project 3 - Return					\$1,500	\$1,500	\$3,000	\$0

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Project 1 - Return		\$500	\$500	\$500	\$500	\$ 500	\$2,500	\$1,500
Project 2 - Cost	\$1,000	\$1,000	\$ 500	0	0	0	\$2,500	1.6
Project 2 - Return			\$1,000	\$1,000	\$1,000	\$1,000	\$4,000	\$1,500
Project 3 - Cost	875	875	875	750	500	0	\$3,000	0
Project 3 - Return					\$1,500	\$1,500	\$3,000	\$0

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## **Simple ROI - 3 Years**

THE STANDISH GROUP

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Project 1 - Return		\$500	\$500	\$500	\$500	\$ 500	\$2,500	\$1,500
Project 2 - Cost	\$1,000	\$1,000	\$ 500	0	0	0	\$2,500	1.6
Project 2 - Return			\$1,000	\$1,000	\$1,000	\$1,000	\$4,000	\$1,500
Project 3 - Cost	875	875	875	750	500	0	\$3,000	0
Project 3 - Return					\$1,500	\$1,500	\$3,000	\$0

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Project 2 - Cost	\$1,000	\$1,000	\$ 500	0	0	0	\$2,500	1.6
Project 2 - Return			\$1,000	\$1,000	\$1,000	\$1,000	\$4,000	\$1,500
Project 3 - Cost	875	875	875	750	500	0	\$3,000	0
Project 3 - Return					\$1,500	\$1,500	\$3,000	\$0

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Project 2 - Cost	\$1,000	\$1,000	\$ 500	0	0	0	\$2,500	1.6
Project 2 - Return			\$1,000	\$1,000	\$1,000	\$1,000	\$4,000	\$1,500
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Project 3 - Return					\$1,500	\$1,500	\$3,000	\$0

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Project 1 - Return		\$500	\$500	\$500	\$500	\$ 500	\$2,500	\$1,500
Project 2 - Cost	\$1,000	\$1,000	\$ 500	0	0	0	\$2,500	1.6
Project 2 - Return			\$1,000	\$1,000	\$1,000	\$1,000	\$4,000	\$1,500
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Project 3 - Return					\$1,500	\$1,500	\$3,000	\$0

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## **Simple ROI - 3 Years**

THE STANDISH GROUP

Months	1 to 6	7 to 12	13 to18	19 to 24	25 to 30	31 to 36	Total	Net
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Project 2 - Cost	\$1,000	\$1,000	\$ 500	0	0	0	\$2,500	1.6
Project 2 - Return			\$1,000	\$1,000	\$1,000	\$1,000	\$4,000	\$1,500
Project 3 - Cost	875	875	875	750	500	0	\$3,000	0
Project 3 - Return					\$1,500	\$1,500	\$3,000	\$0

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Project 1 - Return		\$500	\$500	\$500	\$500	\$ 500	\$2,500	\$1,500
Project 2 - Cost	\$1,000	\$1,000	\$ 500	0	0	0	\$2,500	1.6
Project 2 - Return			\$1,000	\$1,000	\$1,000	\$1,000	\$4,000	\$1,500
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Project 3 - Return					\$1,500	\$1,500	\$3,000	\$0

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THE STANDISH GROUP

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Project 1 - Cost	\$500	\$ 500	0	0	0	0	\$1,000	2.5
Project 1 - Return		\$500	\$500	\$500	\$500	\$ 500	\$2,500	\$1,500
Project 2 - Cost	\$1,000	\$1,000	\$ 500	0	0	0	\$2,500	1.6
Project 2 - Return			\$1,000	\$1,000	\$1,000	\$1,000	\$4,000	\$1,500
Project 3 - Cost	875	875	875	750	500	0	\$3,000	0
Project 3 - Return					\$1,500	\$1,500	\$3,000	\$0

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Project 1 - Return		\$500	\$500	\$500	\$500	\$ 500	\$2,500	\$1,500
Project 2 - Cost	\$1,000	\$1,000	\$ 500	0	0	0	\$2,500	1.6
Project 2 - Return			\$1,000	\$1,000	\$1,000	\$1,000	\$4,000	\$1,500
Project 3 - Cost	875	875	875	750	500	0	\$3,000	0
Project 3 - Return					\$1,500	\$1,500	\$3,000	\$0

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# Reduce Project 3 by Four Months and \$500K

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Months	1 to 6	7 to 12	13 to18	19 to 24	25 to 30	31 to 36	Total	Net
Project 1 - Cost	\$500	\$ 500	0	0	0	0	\$1,000	2.5
Project 1 - Return		\$500	\$500	\$500	\$500	\$ 500	\$2,500	\$1,500
Project 2 - Cost	\$1,000	\$1,000	\$ 500	0	0	0	\$2,500	1.6
Project 2 - Return			\$1,000	\$1,000	\$1,000	\$1,000	\$4,000	\$1,500
Project 2 - Cost	875	875	875	750	0	0	\$2,500	1.6
Project 2 - Return				\$1.000	\$1.500	\$1.500	\$4.000	\$1.500

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# Reduce Project 3 by Four Months and \$500K

THE STANDISH GROUP

Months	1 to 6	7 to 12	13 to18	19 to 24	25 to 30	31 to 36	Total	Net
Project 1 - Cost	\$500	\$ 500	0	0	0	0	\$1,000	2.5
Project 1 - Return		\$500	\$500	\$500	\$500	\$ 500	\$2,500	\$1,500
Project 2 - Cost	\$1,000	\$1,000	\$ 500	0	0	0	\$2,500	1.6
Project 2 - Return			\$1,000	\$1,000	\$1,000	\$1,000	\$4,000	\$1,500
Project 2 - Cost	875	875	875	750	0	0	\$2,500	1.6
Project 2 - Return				\$1,000	\$1,500	\$1,500	\$4,000	\$1,500

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# Reduce Project 3 by Six Months and \$875K

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Months	1 to 6	7 to 12	13 to18	19 to 24	25 to 30	31 to 36	Total	Net
Project 1 - Cost	\$500	\$ 500	0	0	0	0	\$1,000	2.5
Project 1 - Return		\$500	\$500	\$500	\$500	\$ 500	\$2,500	\$1,500
Project 2 - Cost	\$1,000	\$1,000	\$ 500	0	0	0	\$2,500	1.6
Project 2 - Return			\$1,000	\$1,000	\$1,000	\$1,000	\$4,000	\$1,500
Project 3 - Cost	875	875	750	500	0	0	\$2,125	2.1
Project 3 - Return				\$1,500	\$1,500	\$1,500	\$4,500	\$2,375

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# Reduce Project 3 by Six Months and \$875K

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Months	1 to 6	7 to 12	13 to18	19 to 24	25 to 30	31 to 36	Total	Net
Project 1 - Cost	\$500	\$ 500	0	0	0	0	\$1,000	2.5
Project 1 - Return		\$500	\$500	\$500	\$500	\$ 500	\$2,500	\$1,500
Project 2 - Cost	\$1,000	\$1,000	\$ 500	0	0	0	\$2,500	1.6
Project 2 - Return			\$1,000	\$1,000	\$1,000	\$1,000	\$4,000	\$1,500
Project 3 - Cost	875	875	750	500	0	0	\$2,125	2.1
Project 3 - Return				\$1,500	\$1,500	\$1,500	\$4,500	\$2,375

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#### **Net Present Value**

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Months	1 to 6	7 to 12	13	to18	19	to 24	25	to 30	31	to 36	Total	Net
Project 1 - Cost	\$500	\$ 500		0		0		0		0	\$1,000	2.4
Project 1 - Return		\$500		\$485		\$485		\$470	\$	470	\$2,410	\$1,410
Project 2 - Cost	\$1,000	\$1,000	\$	515		0		0		0	\$2,515	1.5
Project 2 - Return			\$	970	\$	970	\$	940	\$	940	\$3,820	\$1,305
Project 3 - Cost	875	875		773		901		530		0	\$3,079	0
Project 3 - Return							\$	1,410	\$ ^	1,410	\$2,820	(\$259)

NPV compares the value of a dollar today versus the value of that same dollar in the future after taking inflation and other factors. If the NPV of a prospective project is positive then it should be accepted, but if it is negative then the project probably should be rejected because cash flows are negative.

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# **Project 3 delivers some function early**

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Months	1 to 6	7 to 12	13 to18	19 to 24	25 to 30	31 to 36	Total	Net
Project 1 - Cost	\$500	\$ 500	0	0	0	0	\$1,000	2.4
Project 1 - Return		\$500	\$485	\$485	\$470	\$ 470	\$2,410	\$1,410
Project 2 - Cost	\$1,000	\$1,000	\$ 515	0	0	0	\$2,515	1.5
Project 2 - Return			\$ 970	\$ 970	\$ 940	\$ 940	\$3,820	\$1,305
Project 3 - Cost	875	1375	901	773	0	0	\$3,049	1.6
Project 3 - Return		\$ 500	\$485	970	\$1,410	\$1,410	\$4,775	\$1,726

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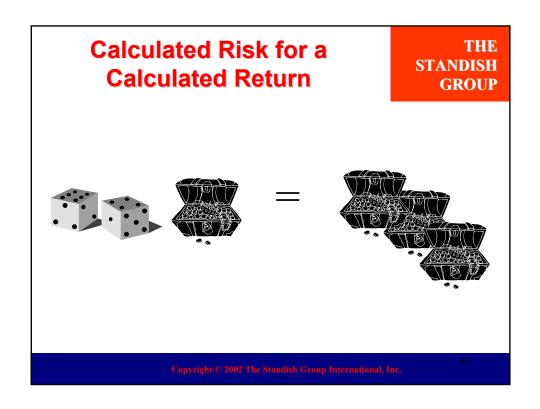
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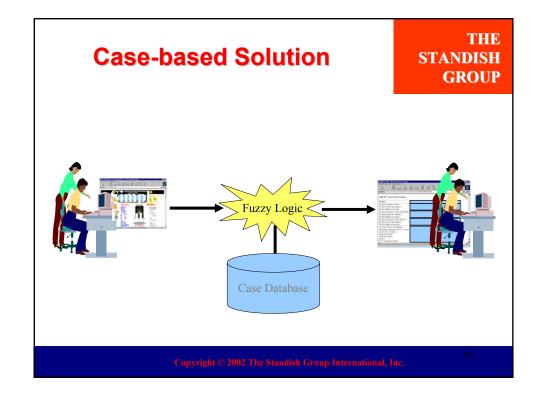
## Project 3 delivers some function early & reduces cost by \$500

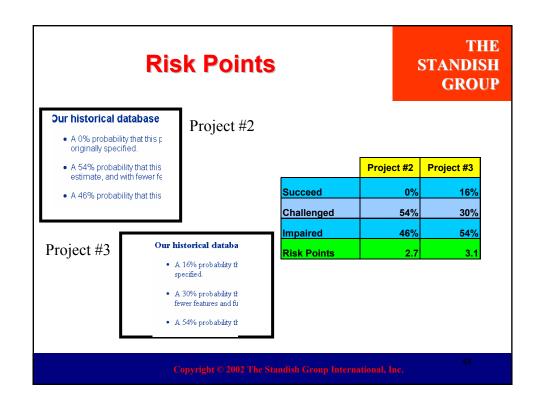
THE STANDISH GROUP

Months	1 to 6	7 to 12	13 to18	19 to 24	25 to 30	31 to 36	Total	Net
Project 1 - Cost	\$500	\$ 500	0	0	0	0	\$1,000	2.4
Project 1 - Return		\$500	\$485	\$485	\$470	\$ 470	\$2,410	\$1,410
Project 2 - Cost	\$1,000	\$1,000	\$ 515	0	0	0	\$2,515	1.5
Project 2 - Return			\$ 970	\$ 970	\$ 940	\$ 940	\$3,820	\$1,305
Project 3 - Cost	875	1375	773	386	0	0	\$2,534	1.9
Project 3 - Return		\$ 500	\$485	970	\$1,410	\$1,410	\$4,775	\$2,241

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### Risk/Reward

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	Project #2	Project #3
Succeed	0%	16%
Challenged	54%	30%
Impaired	46%	54%
Risk Points	2.7	3.1
ROI Ratio	1.5	1.9
Risk/Reward	4.2	5.0

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State of Florida



State of Minnesota

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#### State of Florida's SACWIS

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- Project Began in 1990
- Original cost estimate of \$32 million
- Planned completion date of 1998
- 109 People Working on Project

#### State of Florida's SACWIS

THE **STANDISH GROUP** 



- So far \$170 million spent
- New cost estimate of \$230 million
- New completion date of 2005
- 3 IBM Consultants: Project Manager, Project Architect and Project Analyst

# State of Minnesota's SACWIS

THE STANDISH GROUP



- Project Began in 1999
- Planned completion
  - Sept '99 for phase one
  - Mid-2000 for phase two
- Estimated cost \$1.1 million

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# State of Minnesota's SACWIS

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- Completed in early 2000
- 8 People
- Spent \$1.1 Million
- Attribute success to:
  - Standard infrastructure
  - Minimized requirements

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# Questions from CHAOS University

THE STANDISH GROUP

- Know your company's policy
  - Does the project meet the policy
  - What and when do you capitalize and expense
- Cost savings or revenue generation
  - Hard or soft dollar
  - Where do they come from
- Do these savings or revenue have time limits
  - Can your project meet these time limits

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#### **Questions**

THE STANDISH GROUP

- Who can I trust to tell me the truth
  - Do I trust myself
  - ALL VENDORS LIE!!!
- What are the hidden costs
  - What is the hidden revenue and savings
- What about training and turnover
  - Have you added help desk cost

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#### **Questions**

THE STANDISH GROUP

- Can you tie features & functions to ROI
  - What are the low ROI features
  - Accent the high and eliminate the low ones
- Can you deliver some early
  - What are the high value features
- What are the other projects
  - What's their ROI

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#### **Questions**

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- Do you know your break-even point
  - What is the company policy
- What happens when you go beyond budget
  - Is there a kill switch
- Can you get stakeholders to agree on ROI
  - Users and executives

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## **Predicting Your Future**

www.standishgroup.com

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