

## Project ROI

### Presentation to the Network of Women in Computing Technology

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## Agenda

- Organizational Perspectives of Due Diligence
- Sources of Costs
- Sources Benefits and Value
- Bring it Together
- Giving it Strategic Spin

## Organizational Goal: CEO Perspective

- Increase Revenues Four Fold in Ten years
- Increase Productivity Twice in Ten years
- Lowest Cost Supplier of Service
  - Reduce Overhead Charges (Buildings) 25% in Ten years
  - 30% of Workers Telecommuting
  - Drive paper out our business
  - Close to the Customers

## Goals: CIO Perspective

- Information Technology can Do It
- Adequate Technology Available Now
- And It is Affordable
- The Only Question is How?

## Mission: CFO Perspective

- Keep the Business Solvent!
- Obtain the Best Use of Limited Funds
  - Assure Proper Investment
  - Assure Incremental Justification
  - Assure DUE DILIGENCE
- The Reluctant Encourager of Growth

## Due Diligence

- We have thought out the decisions
- Based on Detail Assessment of
  - Economic Issues
  - Feasible Alternatives
- The Actions Suggested are
  - Reasonable
  - In the Best Economic Interest of the Firm
- The Hurdle Rate
  - Guidelines Depending on Type
  - Exceed Minimum Standard of Return

## Value Added and Fault Rewarded

- A Value-Added Organization
  - The Better it Does the More Resources It Gets
  - Rationally Manageable
  - CFO's your Friend
- A Fault Rewarded Organization
  - The Poorer it Does the More Resources It Gets
  - Not Manageable
  - Out-source If you Can

## Making Money

- What Good are We Doing?
  - Earnings Means Profits
  - Cash means Survival
  - Value or Potential Return
- How Much it will Cost?
  - Cash Outflow (Running Costs)
  - Investments
- Measuring Success
  - Long Terms Earnings
  - Return on Investment

## Total Life Cycle Costs

- Total Costing
  - Equipment is Easy
  - Adoption
  - Fixing Costs
- From Cradle to Grave
  - Getting Rid of the Old Stuff
  - Retraining
  - Maintenance
- Add-Ons
  - Upgrades
  - Applications (Web Site, Video)
  - TRAINING

## Costing the Human-Machine Interface

- Building Systems
  - Analyze and Design
  - Program and Test
  - Implement
- Making Things Work
  - Fixing Systems
  - Helping People to Do Things
  - Training People to Do Things
- Protecting and Securing Systems
- Supporting the Processes
- Managing the Whole Thing

## Value!

- Potential vs. Realizable Benefits
- The Bottom Line
  - Cost Savings
  - Revenue Enhancement
- Business Enhancement
  - Business Growth
  - Multiplier Improvement

## Sources of Value

- Providing Functional Imperatives
- Providing New Benefits
- Liberating Resources
- Expanding Capabilities

## Value - Providing Required Capabilities

- Functional Imperatives
  - Things that Must be Done or
  - Things that Can Not be Allowed to Happen
- The Basic Value to the Firm is a Given
- The Issue is the Approach (Make or Buy)
- Value is based on the "Best" Alternative

## Value - Required Capabilities

<u>Example</u>	<u>Value Comparison</u>
Functional E:Mail	Independent Internet Provider
Enterprise Computing	Outsource Services
PC Purchases	Leases
Internal Hot Line	External Services

## Value - Reducing Costs

- The Basic Value is Reduce use of Resources
- Reduced Costs
  - Man-power (Automation)
  - Material
  - Expenses
  - Investments
- Quantify the Quantity and Probably of Savings

## Value - Cost Savings

<u>Example</u>	<u>Action</u>	<u>Value</u>
Office Automation	Distributed Publication	Reduced Office Support
Electronic Identity (Presence)	Publication of Annual Report	Reduced Printing Costs
E:Commerce	Automated Transactions	Reduced Man-power
Networked Groups	Telecommuting	Reduced Office Space
Teleconferencing	International Meetings	Reduced Travel



## "Realizing" Cost Reductions

- Not all Cost Reduction Actual Happen!
- Reductions Take Place When:
  - The Potential is Real
  - They Can (not Fixed)
  - They Are Measured
  - The Organization is Under the "Gun"
  - Benefits Return to the Organization
  - Additional Cost Don't Off-set the Benefits

## Value - Improving Competitive Advantage

- Functions that are presently not done
  - Presently too expensive
  - Requires non-existent infrastructure
  - Value is based on a Change in Practice (Ubiquitous)
- May provide large potential competitive advantage
- The Issue is to do it or not do it
- Value is based on the potential outcomes (tricky)

## Value - Improving Competitive Advantage

<u>Example</u>	<u>Benefits</u>	<u>Value</u>
E:Commerce	Access to New Customers	New Sales
On-site Production of Promotional Materials	Customized Advertising	Increased Sales
Customer Relationship Management (CRM)	Customize and Target Sales	Increased Customer Share
Electronic Data Interchange (EDI)	Provide Fast Tracking of Products by Customer	Reduced Lost Customers

## Value - Expanded Capabilities

- Better, Faster, and More
  - Extra Bandwidth
  - Terabyte Disk Space
  - Gigabytes of RAM
  - MIP's to Burn
- Looking to the Future?
- If You Have, They Will Come?
- Selling Extra Capacity?

## Value - Expanded Capabilities

<u>Example</u>	<u>Capacity</u>	<u>Extracting Value</u>
Distributed High Speed	Bandwidth	Using it in the Future
Super Servers	Disk Space	Selling Capacity
Super Personal Computers	Computation	Applications will Rise to Absorb
Wireless Systems	Bandwidth	The Need is There?

## Living in an Uncertainty World

- Things may not Work as Planned
- Costs may exceed the Plan
- Values may not be Realized
- Unforeseen Benefits may Materialize
- Better Alternatives may Materialize
- Needs may change

## Capturing the Uncertainty

- Sensitivity Analysis
  - What is the impact of changes?
  - What is most sensitive?
  - Due Diligence
- Scenarios
  - Providing Different World Views
  - Stories
  - Multiple Outcomes
  - Upside and Downside
- Risk Analysis
  - Assess Subjective Probabilities of Events
  - Evaluate Possible Outcomes of Events
  - Simulate the Distribution of Outcomes

## Evaluating Return - The Hurdle

- Quantitative Measures
  - Return on Investment
  - Payback Period
  - Break-even
  - Present Values
  - The Hurdle Rate
- Strategic Value
  - Alternatives
  - Success without It

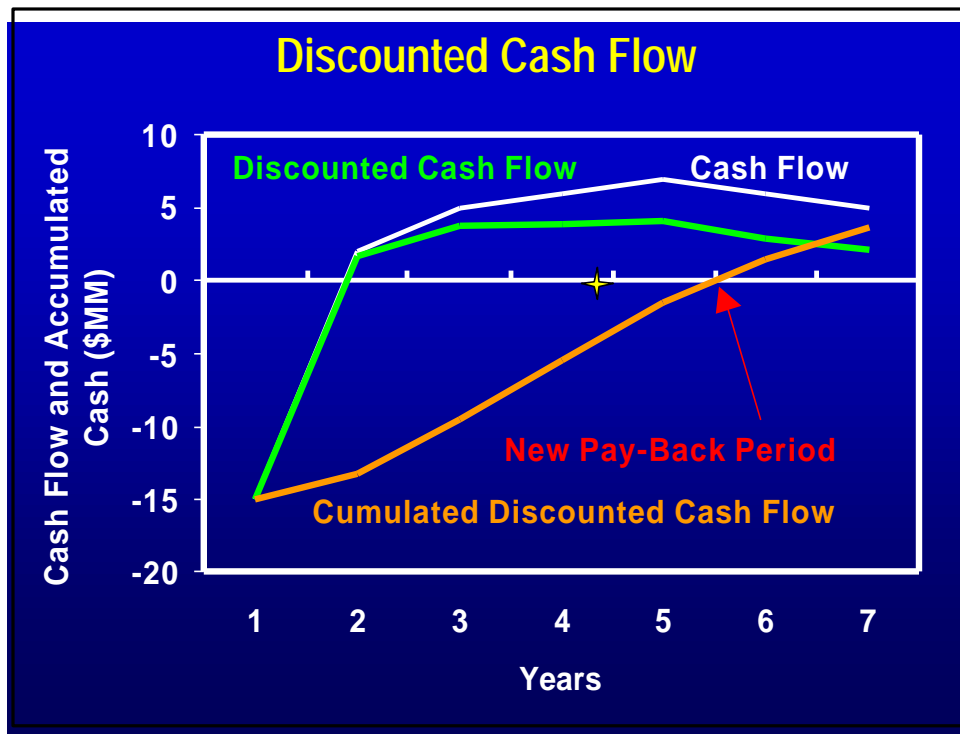
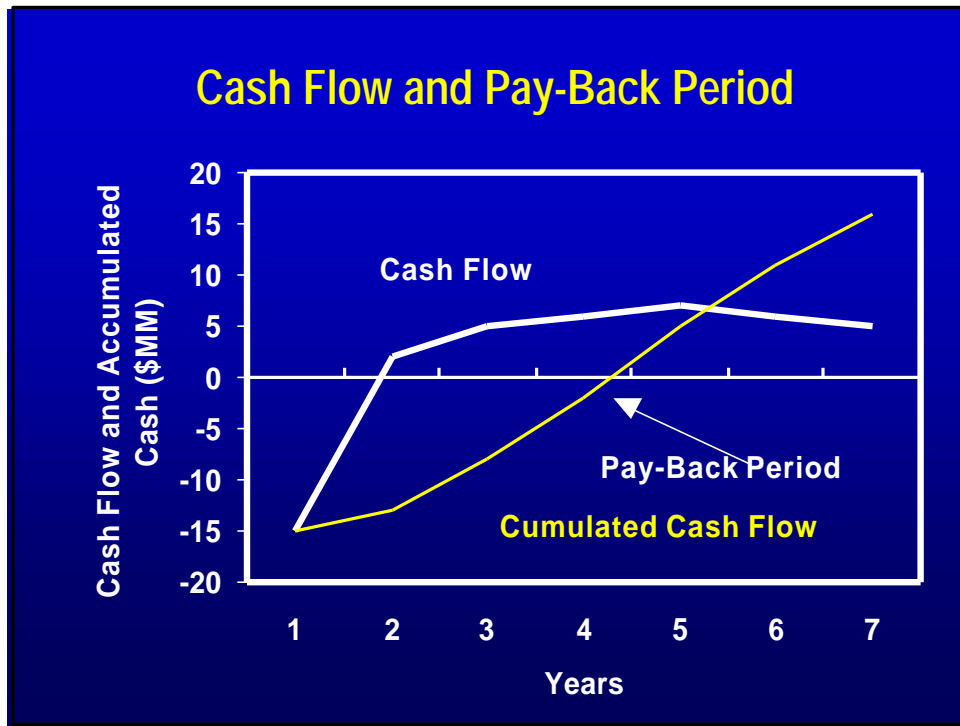
## Time Value of Money

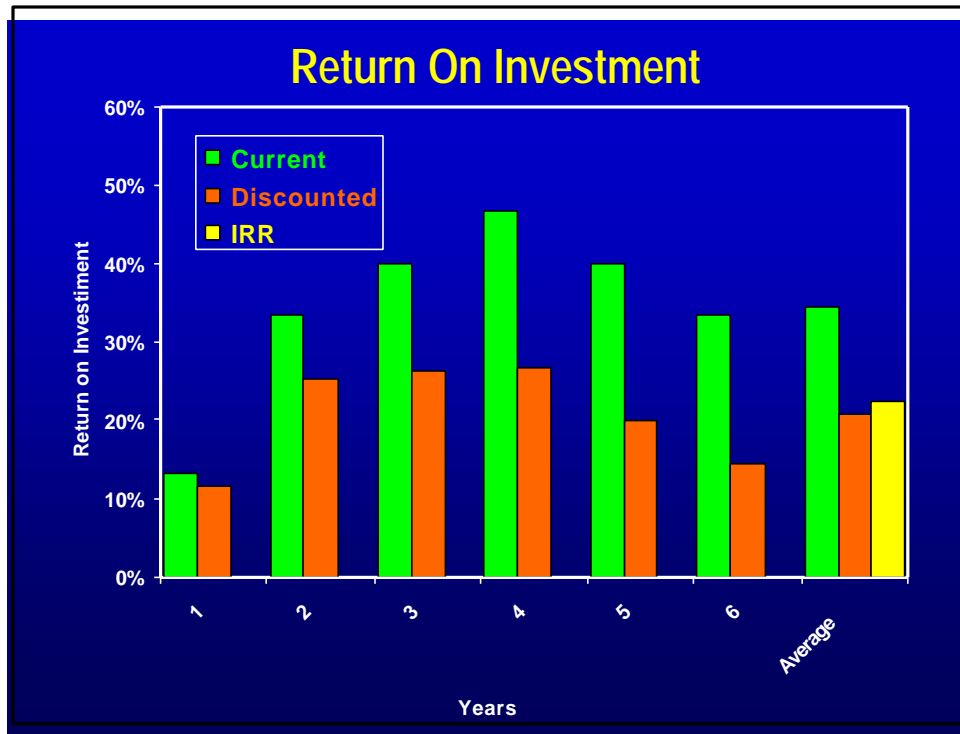
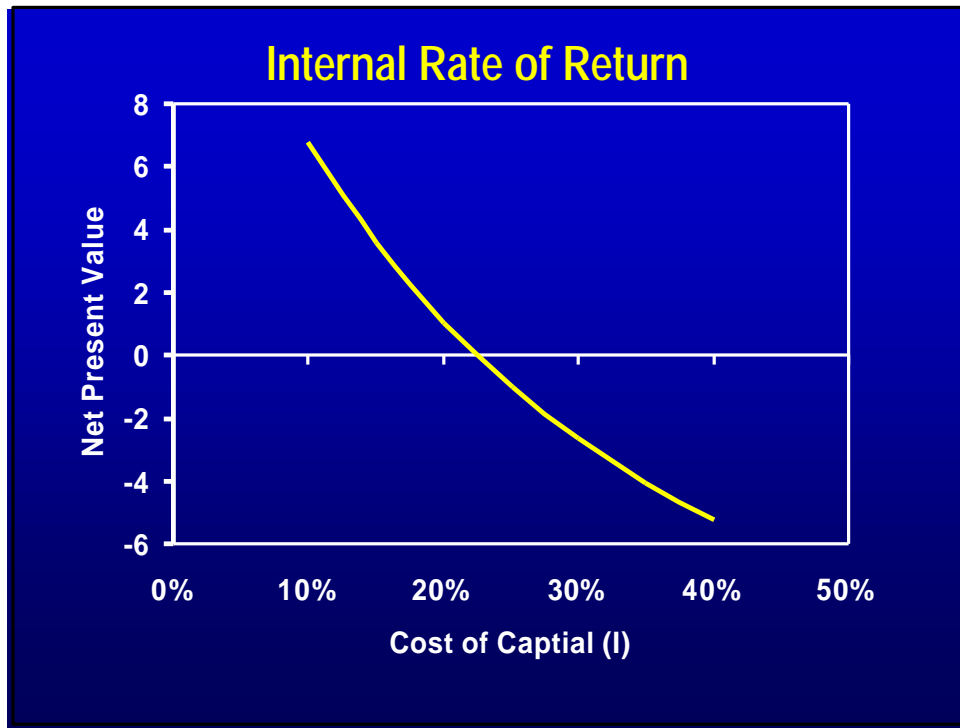
- Fixed Time Horizons
- Cash Flow
  - Discounting Cash Flow
  - Net Present Value
  - Internal Rate of Return

## Cash Flow and Net Value

- Cash Flow =  $\$n$
- Discounted Cash Flow =  $\$n/(1+i)^n$
- Net Present Value =  $\sum \$n/(1+i)^n$
- Internal Rate of Return =  $irr$

$$\text{such that: } \sum \$n/(1+irr)^n = 0$$





## Bringing It Together

- Due Diligence Revisited
  - Has this Project be Rationally Assessed?
  - Is this the Best Approach?
  - What are the Alternatives?
- The Strategic Spin
  - Meeting the Firm's Goals
  - Assessing Joint Benefits
  - Focusing on Strategic Direction
  - Achieve the "Vision"

## Summary

- Financial Analysis is a Perspective
- Look Strategically
- Measure Operationally, if Feasible
- Use the Language of Finance