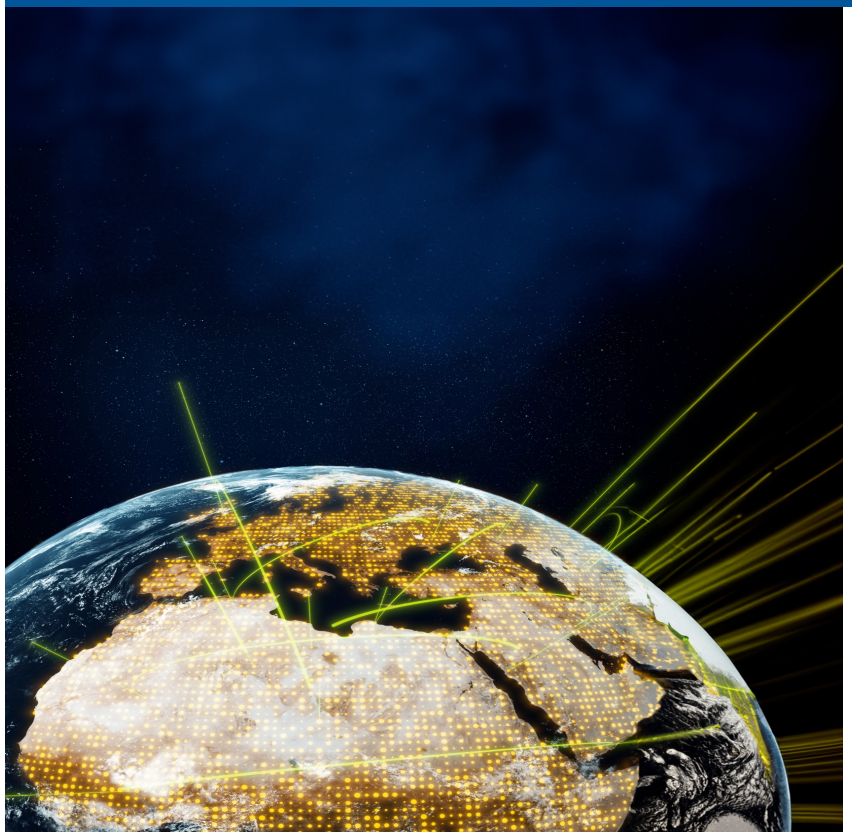
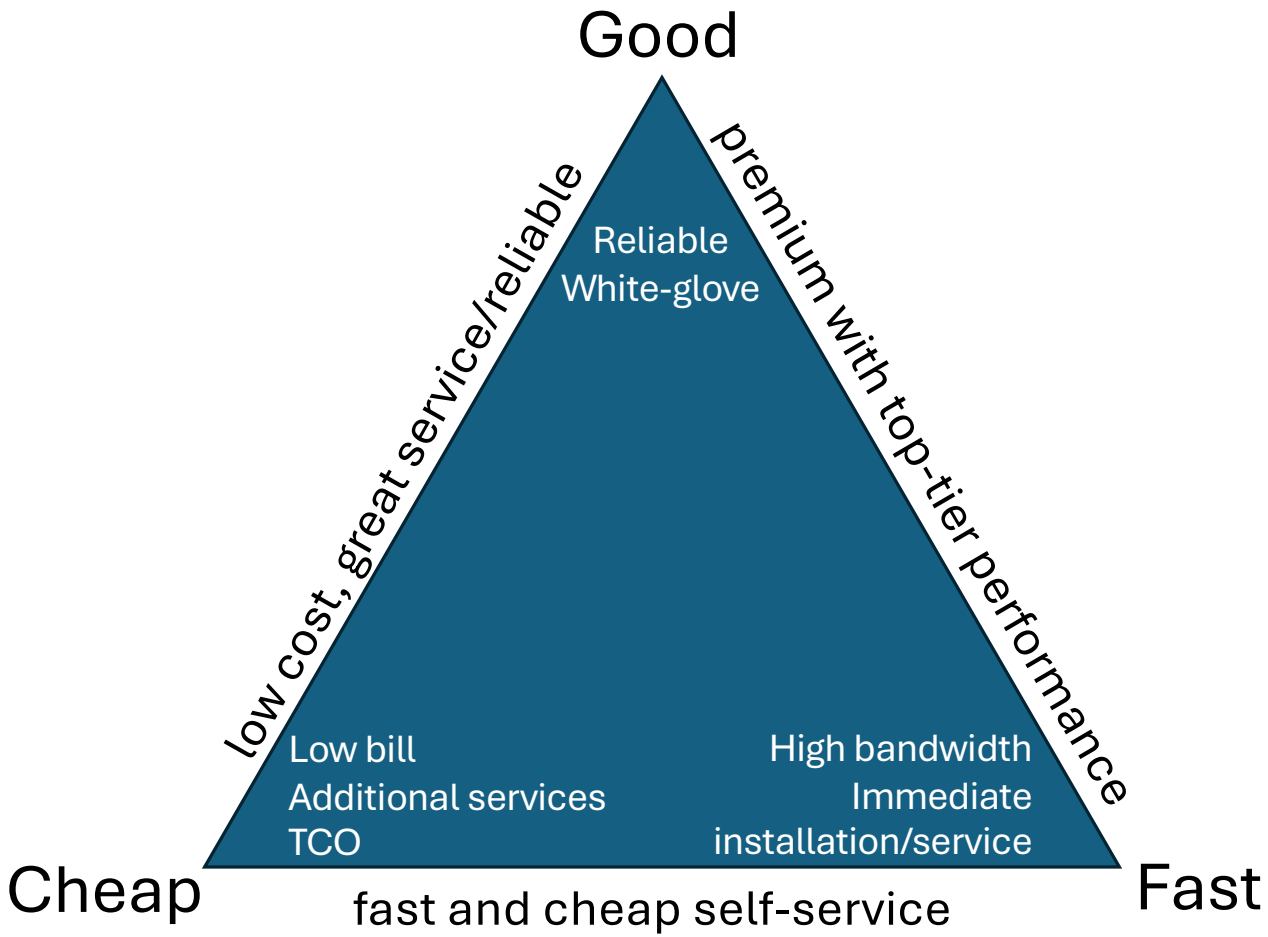
IPv4.GLOBAL

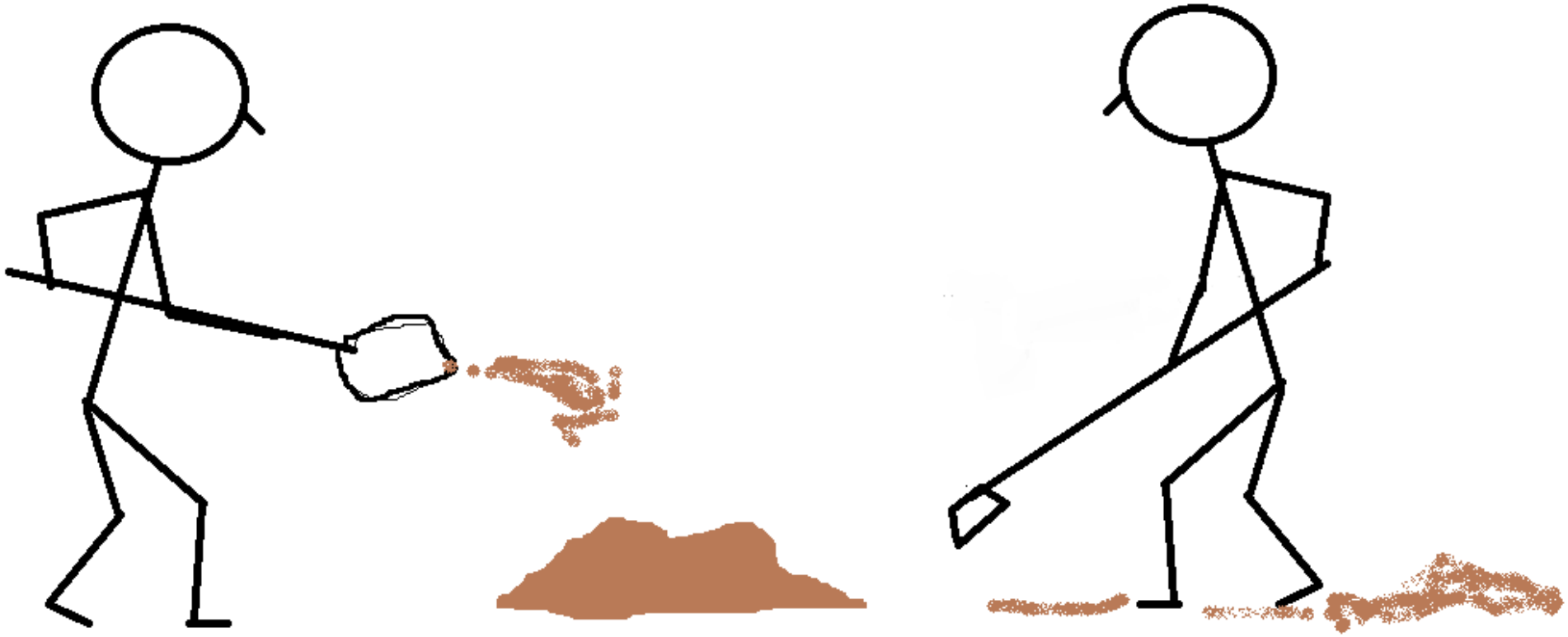
By Hilco Streambank™

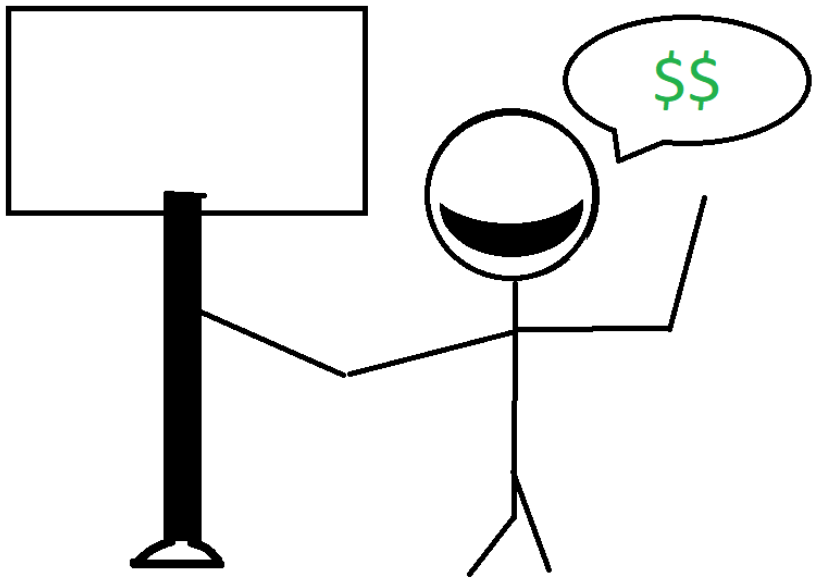


Good, Fast, Cheap
Which Two?

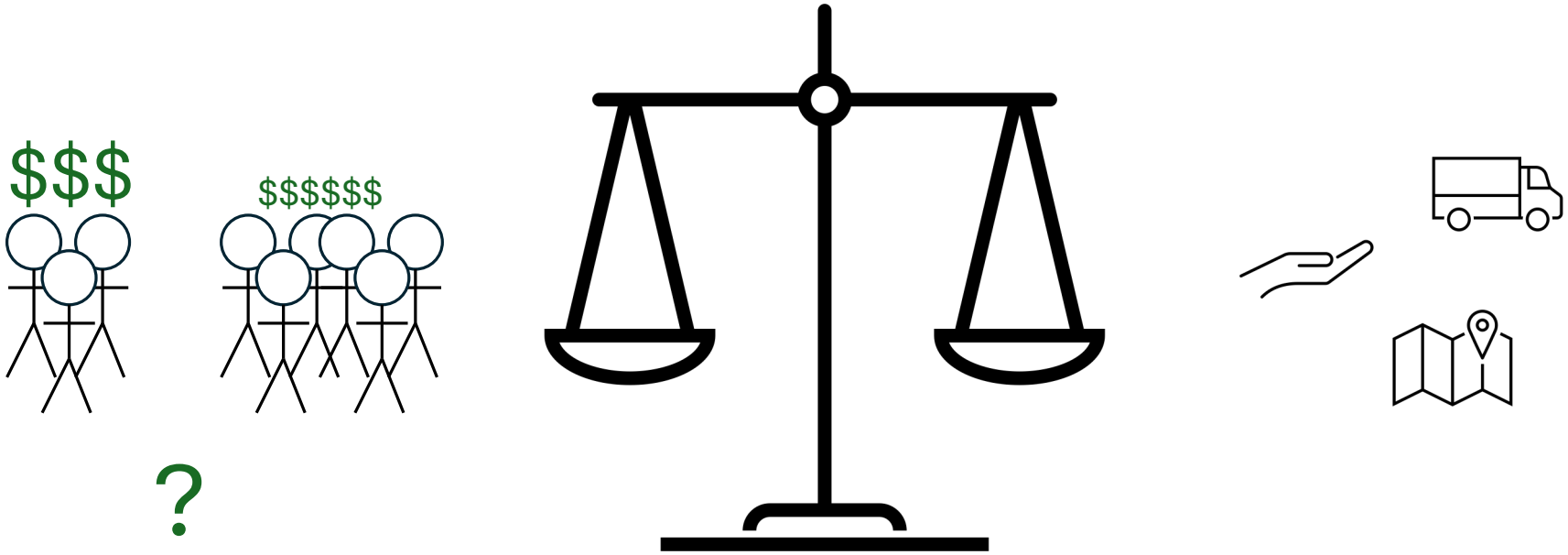
NANOG93
February 2025


Good
low cost, great service/reliable
premium with top-tier performance
Reliable
White-glove
Low bill
Additional services
TCO
High bandwidth
Immediate
installation/service
Cheap
fast and cheap self-service
Fast





Align Revenues and Expenses



For any given project, model:
how much *additional* revenue it is going to generate, and
how much it's going to cost or save.

Project X

	Revenues	Expenses
Initial Expense		($500,000)
Annual Maintenance		($20,000)
One-time revenue	$10,000	
Incremental ARR	$10,000	
New ARR	$50,000	

Is this a good use of our money over time?

Project X

	Revenues	Expenses
Initial Expense		($500,000)
Annual Maintenance		($20,000)
One-time revenue	$10,000	
Incremental ARR	$10,000	
New ARR	$50,000	

	1/1/2025	1/1/2026	1/1/2027	1/1/2028	1/1/2029	1/1/2030	Total
Revenues		$70,000	$110,000	$160,000	$210,000	$260,000	$810,000
Expenses	($500,000)	($20,000)	($20,000)	($20,000)	($20,000)	($20,000)	($600,000)
Year	($500,000)	$50,000	$90,000	$140,000	$190,000	$240,000	$210,000
Total	($500,000)	($450,000)	$360,000)	($220,000)	($30,000)	$210,000	$210,000

Internal Rate of Return

	Revenues	Expenses
Initial Expense		($500,000)
Annual Maintenance		($20,000)
One-time revenue	$10,000	
Incremental ARR	$10,000	
New ARR	$50,000	

	1/1/2025	1/1/2026	1/1/2027	1/1/2028	1/1/2029	1/1/2030	Total
Revenues		$70,000	$110,000	$160,000	$210,000	$260,000	$810,000
Expenses	($500,000)	($20,000)	($20,000)	($20,000)	($20,000)	($20,000)	($600,000)
Total	($500,000)	$50,000	$90,000	$140,000	$190,000	$240,000	$210,000

IRR	**10.2%**

=XIRR(B11:G11,B8:G8)

=XIRR(values, dates)

Spreadsheet – Interest Income

	Revenues	Expenses
Initial Expense		($500,000)
Interest Income	4.0% APR	

Spreadsheet – Interest Income

	Revenues	Expenses
Initial Expense		($500,000)
Interest Income	4.0% APR	

	1/1/2025	1/1/2026	1/1/2027	1/1/2028	1/1/2029	1/1/2030	Total
Revenues		$20,404	$21,237	$22,104	$23,006	$23,944	$110,695
Running Ttl	$500,000	$520,404	$541,641	$563,745	$586,750	$610,695	

IRR	**4.4%**	=XIRR(B11:G11,B8:G8) =XIRR(values, dates)
APY (compounding daily)	**4.1%**	=((1+APR/CPY)^CPY)-1
Average Annual Return	4.4%	

Spreadsheet - Leverage

	Revenues	Expenses
Initial Expense		($500,000)
Annual Maintenance		($20,000)
Interest Expense		10%
One-time revenue	$10,000	
Incremental ARR	$10,000	
New ARR	$50,000	

Spreadsheet - Leverage

	Revenues	Expenses
Initial Expense		($500,000)
Annual Maintenance		($20,000)
Interest Expense		10%
One-time revenue	$10,000	
Incremental ARR	$10,000	
New ARR	$50,000	

	1/1/2025	1/1/2026	1/1/2027	1/1/2028	1/1/2029	1/1/2030	Total
Revenues		$70,000	$110,000	$160,000	$210,000	$260,000	$810,000
Expenses	($500,000)	($70,000)	($70,000)	($70,000)	($70,000)	($70,000)	($600,000)
Total	($500,000)	$0	$40,000	$90,000	$140,000	$190,000	($40,000)

Spreadsheet - Leverage

	Revenues	Expenses
Initial Expense		($500,000)
Annual Maintenance		($20,000)
Interest Expense		10%
One-time revenue	$10,000	
Incremental ARR	$10,000	
New ARR	$50,000	

IRR
-2.0%

	1/1/2025	1/1/2026	1/1/2027	1/1/2028	1/1/2029	1/1/2030	Total
Revenues		$70,000	$110,000	$160,000	$210,000	$260,000	$810,000
Expenses	($500,000)	($70,000)	($70,000)	($70,000)	($70,000)	($70,000)	($600,000)
Total	($500,000)	$0	$40,000	$90,000	$140,000	$190,000	($40,000)

$$0 = NPV = \sum_{n=0}^{N} \frac{CFn}{(1+IRR)^{n}}$$

N = total number of time periods
n = time period
CFn = Cash Flow for period n

Net Present Value is the sum of the series of cash flows over time divided by the Internal Rate of Return squared.

Examples

- Spend $100,000 on automation
- Spend $10,000 on employee retention
- Spend $1MM on upskilling customer service
- Spend $500K in improving security

Should we spend $100,000 on Automation?

	Revenues	Expenses
Development Time (300 hours @$100/hr)		($30,000)
Manual Entry Reduction (150 hours $100/hr)		$15,000
Reduced downtime (10 hours $150/hr, 80% chance)		$1,200

Risk ($) = Probability (%) X Impact ($)

	80%	X	$1500
$1,200 =	80%	X	$1500

Should we spend $100,000 on Automation?

	Revenues	Expenses
Development Time (300 hours @$100/hr0		($30,000)
Manual Entry Reduction (150 hours $100/hr)		$15,000
Reduced downtime (10 hours $150/hr, 80% chance)		$1,200

	1/1/2025	1/1/2026	1/1/2027	1/1/2028	1/1/2029	1/1/2030	Total
Revenues							
Expenses	($30,000)	$16,120	$16,120	$16,120	$16,120	$16,120	$50,600
Total	($30,000)	$16,120	$16,120	$16,120	$16,120	$16,120	$50,600
IRR	45.5%						
ROI	169%						

Should we spend $10K to Keep Employees?

	Hours	Cost/Unit	Extended
Cost of Prof. Dev. Opportunity	40	$10	$4,000
Cost of Employee Away	40	$150	$6,000
Cost Avoided: Work Undone	480	$150	$7,200
Cost Avoided: Ramp Up	960	$50	$48,000
Chance of Losing Employee			25%

Should we spend $10K to Keep Employees?

	Hours	Cost/Unit	Extended
Cost of Prof. Dev. Opportunity			$4,000
Cost of Employee Away	40	$150	$6,000
Cost Avoided: Work Undone	480	$150	$7,200
Cost Avoided: Ramp Up	960	$50	$48,000
Chance of Losing Employee			25%

	1/1/2025	1/1/2026	1/1/2027	1/1/2028	1/1/2029	1/1/2030	Total
Revenues		$13,800	$13,800	$13,800	$13,800	$13,800	$69,000
Expenses	($10,000)	($10,000)	($10,000)	($10,000)	($10,000)	($10,000)	($60,000)
Total		$3,800	$3,800	$3,800	$3,800	$3,800	$9,000
IRR	26.1%						
ROI	90%						

Should we spend $1MM on Customer Service?

	Hours	Cost/Unit	Extended
Course Development	300	$100	$30,000
CSR Time in Training Annually	50	$80	$4,000
Reduced Ticket Time Annually	500	$80	$40,000
Reduced Cancel + New Sales	10	$200	$2,000
CSR staff churn	120	$200	$24,000

Should we spend $1MM on Customer Service?

	Hours	Cost/Unit	Extended
Course Development	300	$100	$30,000
CSR Time in Training Annually	50	$80	$4,000
Reduced Ticket Time Annually	500	$80	$40,000
Reduced Cancel + New Sales	10	$200	$2,000
CSR staff churn	120	$200	$24,000

	1/1/2025	1/1/2026	1/1/2027	1/1/2028	1/1/2029	1/1/2030	Total
Revenues		$42,000	$42,000	$42,000	$42,000	$42,000	$210,000
Expenses	($30,000)	($24,000)	($24,000)	($24,000)	($24,000)	($24,000)	($150,000)
Total	($30,000)	$18,000	$18,000	$18,000	$18,000	$18,000	$60,000
IRR	52.8%						
ROI	200%						

Should we spend $500K Improving Security?

	Hours	Cost/Unit	Extended
Avoided lost work	800	$150	$120,000
Avoided lost business		$100,000	$100,000
Project Cost			$500,000
Annual Maintenance			$10,000
Probability of Attack per Year			40%

Should we spend $500K Improving Security?

	Hours	Cost/Unit	Extended
Avoided lost work	800	$150	$120,000
Avoided lost business		$100,000	$100,000
Project Cost			$500,000
Annual Maintenance			$10,000
Probability of Attack per Year			40%

	1/1/2025	1/1/2026	1/1/2027	1/1/2028	1/1/2029	1/1/2030	Total
Revenues		$88,000	$88,000	$88,000	$88,000	$88,000	$440,000
Expenses	($500,000)	($10,000)	($10,000)	($10,000)	($10,000)	($10,000)	($550,000)
Total	($500,000)	$78,000	$78,000	$78,000	$78,000	$78,000	($110,000)
IRR	-7.7%						
ROI	-22%						

Key Notes

- Define your position in the triangle
- If you don’t know the value of an activity, you don’t know if is matters
  - *How much* revenue does it add?
  - *How much* does it reduce costs? Can you prove it?
  - *How much* risk does it mitigate?
- Risk ($) = Probability (%) X Impact ($)
- ROI tells you amount of return
- IRR takes the time value of money into account

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