Whitepaper

Cut smart, not everywhere

Priority-based budget optimization for resource-constrained programs. How AHP decision models protect mission-critical spending and eliminate waste.

Fast Time To Market methodology.

A method for cutting budgets without cutting capability. Replaces across-the-board reductions with a structured ranking that protects the spending that ships the product and eliminates the spending that does not.

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Cut smart, not everywhere

Core thesis. Every dollar is an investment in the company's primary objective. Spending that accelerates the mission is investment, and it is protected. Spending that does not is overhead, and it is cut. A structured decision model makes the distinction explicit, defensible, and immune to the politics that turn most cost programs into across-the-board reductions.

Overview

Abstract

Equal pain is not equal impact. When budgets tighten, the reflex is to cut every line by a fixed percentage. The approach feels fair and the math is simple, but the outcomes are predictable. BCG's 2024 survey of 2,080 executives found that only one cost program in five succeeds [1], and McKinsey's longitudinal work shows three in four companies fail to sustain reductions for more than four years [2]. Equal cuts treat mission-critical investment and discretionary overhead as if they were the same line. They are not.

The alternative is the Analytic Hierarchy Process. Saaty introduced AHP in 1980 [3]; Vargas adapted it for project portfolios [4]. It replaces "what percentage do we cut?" with "which spending categories advance the mission and which do not?" Every category is rated against three weighted criteria — cost magnitude, value to the mission, impact on time-to-market — and the composite ranking turns the cost program from a negotiation into a decision.

Two high-technology histories illustrate the contrast. Intel's 2024 program cut $10 billion across headcount, capital expenditure, and operating expenses without separating capabilities that drove competitive recovery from those that did not [5, 6]. The stock fell 60% over the year [7], the company posted its first annual net loss since 1986 [6], and Intel underinvested in the AI accelerator market where Nvidia's revenue grew 262% year over year [8]. Apple under Tim Cook is the counterexample. SG&A was cut in half as a share of revenue while R&D was protected and expanded, and net income grew from $3.5 billion in FY2007 to $39.5 billion in FY2014 [9, 10].

The model has three components. A pairwise comparison matrix derives the criterion weights from structured judgments and verifies their consistency. A scoring matrix rates nine representative spending categories against each criterion. A composite priority ranking produces protect / invest / review / cut recommendations. The full exercise runs in a three-hour session with the executive team and the output is a ranking the CFO can defend to the board.

The method is part of the lateralworks Fast Time To Market methodology, and the AHP model and constraint loader live in a single artifact in fastDecisionAI [11].

01

Problem

Why across-the-board cuts fail

Cutting everything by a fixed percentage feels equitable. It is not. Equal pain falls on lines that drive the business and on lines that do not, and the consequences fall on the business, not on the lines.

The evidence against indiscriminate cost cutting is substantial. BCG's 2024 global survey of 2,080 business leaders found that only about one cost program in five was rated successful [1]. McKinsey tracked 238 S&P Global 1200 companies that announced G&A reductions between 2003 and 2010 and found that just 62 — one in four — sustained those reductions for four years [2]. Half the firms in the BCG survey said they launch cost programs every one to two years, which itself confirms the diagnosis. Reductions that do not stick are reductions that did not change anything.

Section 01

Why across-the-board cuts fail

A 20% cut to test-equipment consumables delays product qualification by months. A 20% cut to corporate conference travel delays nothing. Treating these as the same line is not prudent management. It is the absence of management.

The Intel cautionary tale

Intel is the most relevant recent case for any semiconductor or capital-equipment firm. Facing share losses to AMD and Nvidia and revenue erosion, Intel announced a $10 billion cost reduction plan in Q2 2024 [5]. The cuts were broad: a headcount reduction of more than 15% (about 16,500 employees), capital expenditure reductions, and across-the-board operating-expense controls. The company grounded its employee air shuttle, cut bonuses, and reduced staff at sites from Oregon to California to Israel.

The reductions did not separate the functions that fueled competitive recovery from the ones that did not. Revenue per employee fell from $704,000 in 2020 to $435,000 in 2023 [12], a productivity collapse that broad headcount cuts could not address. The stock fell 60.1% in 2024 [7], and the company posted its first full-year net loss since 1986 [6]. Critically, while Intel cut everywhere, it under-invested in the AI accelerator market that drove Nvidia's Q1 FY25 revenue up 262% year over year [8]. Indiscriminate cuts saved dollars in the short term while starving the capabilities Intel needed to compete in the market that mattered most.

The Apple counterexample

Tim Cook's tenure at Apple is the opposite playbook. As COO from 2007 and CEO from 2011, Cook did not cut everything equally. He targeted operational costs surgically: SG&A as a share of revenue was cut roughly in half between 2007 and 2014, while R&D was held flat or expanded. Inventory was driven near zero — Cook compared excess inventory to perishable food — freeing working capital. Suppliers were consolidated and renegotiated.

The outcome: Apple's net income grew from $3.5 billion in FY2007 to $39.5 billion in FY2014 [9, 10], driven by higher margins on products that cost less to manufacture while the capabilities that differentiated them — hardware design, silicon engineering, software integration — were protected and expanded. Cook cut cost from functions that did not differentiate Apple (logistics, warehousing, supplier-management overhead) and redirected savings into capabilities that did (chip design, display technology, manufacturing partnerships). This is priority-based cost optimization in practice [13].

Cautionary tale

The Intel decade

Intel cut $10 billion across the board. Revenue per employee collapsed. Nvidia’s AI business grew 262%.

Intel Corporation, 2024 cost program

SEC 10-Q FY2024 — net loss first since 1986

02

Framework
Priority-based optimization

Replace the question. Stop asking what percentage to cut. Start asking which spending categories advance the mission and which do not.

The Analytic Hierarchy Process, introduced by Saaty [3] and applied to project portfolios by Vargas [4], is the standard tool for the new question. AHP decomposes a complex allocation decision into a hierarchy: a goal at the top, evaluation criteria in the middle, and spending categories at the bottom. Each category is scored against each criterion, and the criteria themselves are weighted through pairwise comparisons. The method is widely used in defense procurement, infrastructure investment, and technology development, and the PMI has published detailed guidance for portfolio prioritization [4].

Section 02

Priority-based optimization

The hierarchy is shown in Figure 1. The goal — accelerate the lead-product launch — decomposes into three weighted criteria: cost magnitude (45%), value to the mission (35%), and impact on time-to-market (20%). Each spending category inherits a composite score across all three criteria, and the score determines the action.

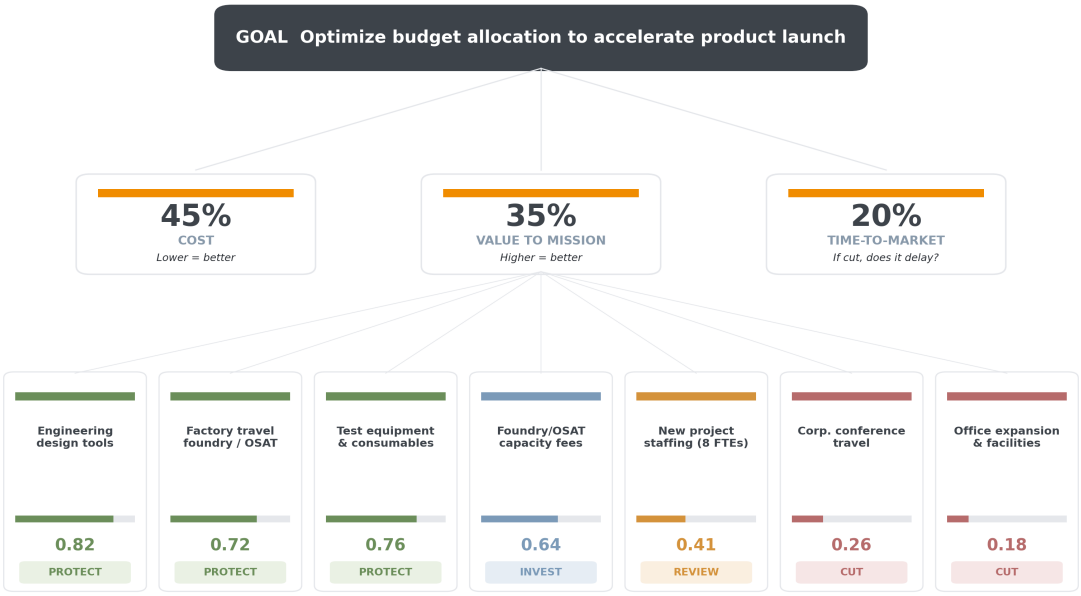

Figure 1. AHP budget prioritization hierarchy. The goal decomposes into three weighted criteria, each applied to seven representative spending categories. Composite scores determine action: protect, invest, review, or cut.

Lateralworks applies the same machinery at the entry to the project portfolio: rank against weighted criteria first, then gate against the resource ceiling [11]. The budget conversation and the portfolio conversation are the same conversation from two angles. One looks at dollars, the other at engineering capacity. The AHP model produces the ranking both need.

Reinertsen makes the same point on the schedule side. Starts control is the highest-leverage cycle-time lever because queue length grows non-linearly with utilization [14]. The budget version is the same shape: starving a mission-critical capability and missing the market is non-linearly more expensive than the dollars the cut saved.

03

Build

The three-step AHP model

The model has three components. Weight the criteria. Score the categories. Read the ranking. Each step is a structured judgment with an arithmetic output, and the structure is what removes politics from the conversation.

Section 03

The three-step AHP model

Step 1. Weight the criteria.

The first step asks how much each criterion matters. Each pair of criteria is compared on the Saaty 1–9 scale, where 1 is equal importance and 9 is extreme dominance [3]. The comparison matrix in Figure 2 reflects the judgment that cost magnitude is moderately more important than mission value (score 2) and moderately-to-strongly more important than time-to-market impact (score 3), and that mission value is moderately more important than time-to-market impact (score 2). The lower triangle carries the reciprocal values.

	Cost (lower=better)	Value to mission	Impact on time-to-market	Priority vector
Cost (lower=better)	**1**	**1**	**2**	**3**	**0.54 → 45%**
Value to mission	1/2	1/2	**1**	**2**	**0.30 → 35%**
Impact on time-to-market	1/3	1/3	1/2	**1**	**0.16 → 20%**

Saaty scale: 1 = equal, 3 = moderate, 5 = strong, 7 = very strong, 9 = extreme

Consistency ratio: 0.008 (< 0.10 threshold — consistent judgments)

Figure 2. Pairwise comparison matrix for the three budget criteria. The principal eigenvector produces the priority weights: cost 45%, value 35%, impact 20%. A consistency ratio of 0.008 — well below the 0.10 threshold — confirms the judgments are logically coherent.

The weights say something honest about how the team is reasoning. Cost magnitude matters — a $50K line item does not deserve the same scrutiny as a $3.7M one — but mission alignment and schedule impact together (55% combined) outweigh raw cost. A low-cost item critical to the mission is always protected. A high-cost item that does not advance the mission is cut, regardless of tradition or internal politics.

Step 2. Score the categories.

Each spending category is then rated on the same 1–9 scale against each criterion. For the cost criterion, a high score means low cost (favorable). For value and impact, a high score means high contribution. The weighted composite is the sum of each criterion score multiplied by its weight, normalized to a 0–1 range. Figure 3 shows the result for nine categories representative of an early-stage semiconductor program.

Spending category	Cost score (wt: 45%)	Value score (wt: 35%)	Impact score (wt: 20%)	Weighted composite	Action
Engineering design tools	8	9	7	0.82	PROTECT
Factory travel (foundry/OSAT)	5	9	9	0.72	PROTECT
Test equipment & consumables	7	8	8	0.76	PROTECT
Foundry/OSAT capacity fees	3	9	9	0.64	INVEST
IT infrastructure maintenance	8	5	4	0.60	MAINTAIN
New project staffing (8 FTEs)	2	6	5	0.41	REVIEW
Marketing collateral	7	3	2	0.44	REDUCE
Corporate conference travel	4	2	1	0.26	CUT
Office expansion & facilities	2	2	1	0.18	CUT

Scores: 1–9 Saaty scale (1 = very low, 5 = moderate, 9 = very high). Composite = Σ(score × criterion weight), normalized to 0–1.

Cost score: high = low cost (favorable). Value/Impact scores: high = high contribution (favorable).

Figure 3. Category scoring matrix. Each spending category is scored against the three weighted criteria. Scores are color-coded by strength. The composite score on the right drives the protect / invest / review / cut recommendation.

Step 3. Read the ranking.

The composite scores produce a clear ranking. Categories above 0.65 are mission-critical and protected. Categories between 0.45 and 0.65 are candidates for strategic investment or scope review. Categories below 0.30 are candidates for elimination.

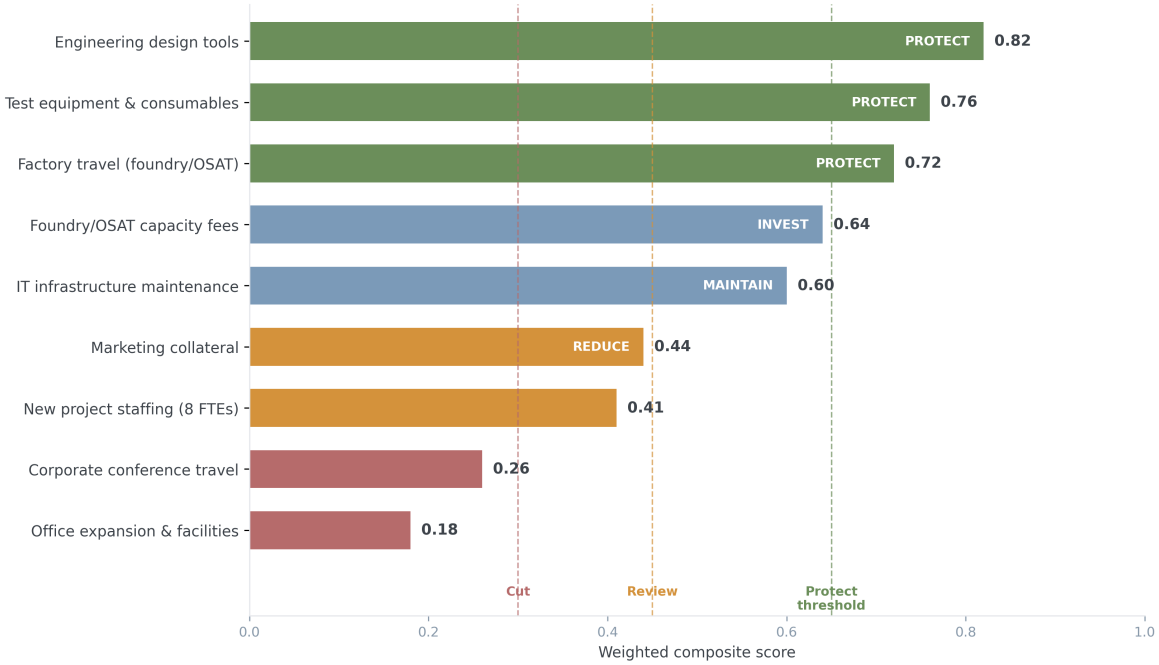

Figure 4. Weighted composite priority ranking. Dashed lines mark the action thresholds. Engineering design tools, test equipment, and factory travel score highest. Corporate conference travel and office expansion score lowest.

The ranking reveals what across-the-board cuts conceal. Engineering design tools (composite 0.82) and office expansion (composite 0.18) are not remotely comparable spending categories. Cutting both by 25% would reduce a $50K tool license and a $500K office fit-out by the same percentage — saving $12,500 on the tool at the cost of delayed design iterations, while saving $125,000 on the office with no impact on the product. The AHP model makes this asymmetry explicit and defensible.

Visual confirmation: the cost–value matrix

The cost–value matrix in Figure 5 plots each category by its value to the mission against its cost. Four quadrants map directly to actions: protect and expand (high value, low cost), invest strategically (high value, high cost), eliminate (low value, high cost), and deprioritize (low value, low cost).

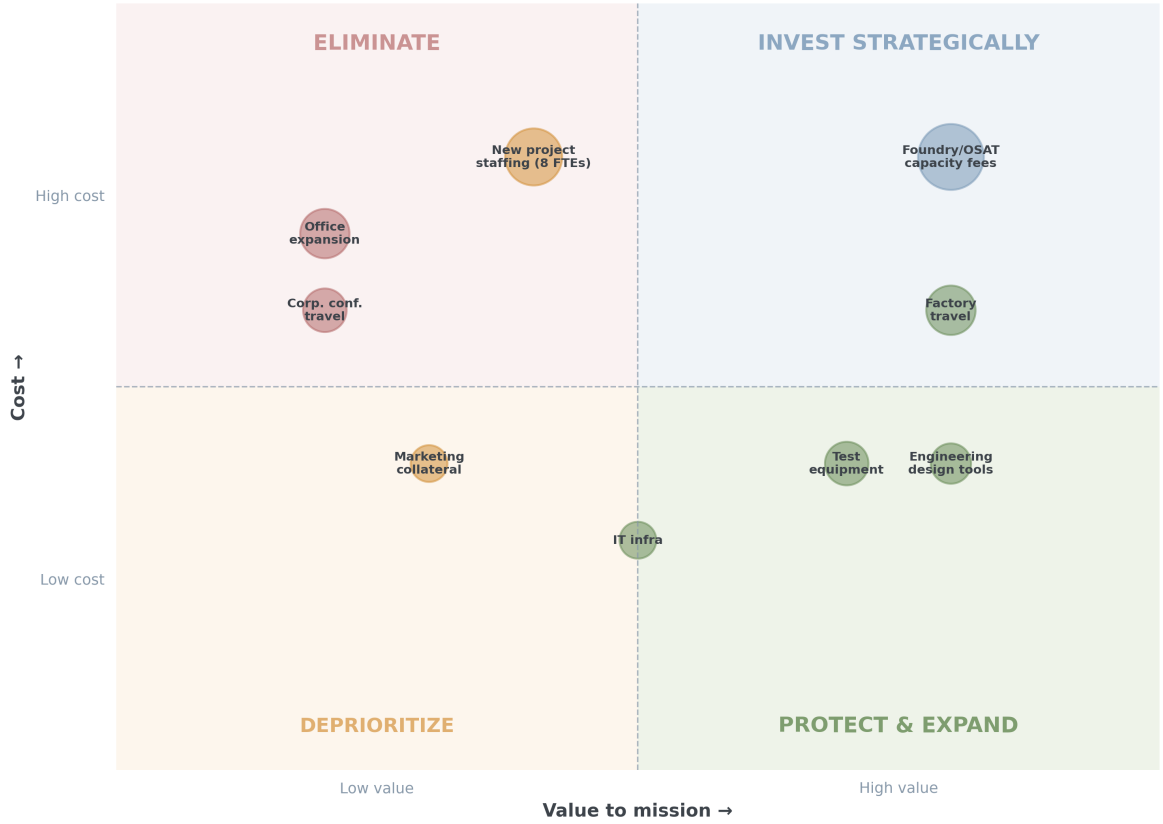

Figure 5. Cost–value matrix. Bubble size represents relative budget magnitude. The upper-left quadrant — high cost, low value — is where cuts are concentrated. The lower-right is where the dollars belong.

04

Practice

Applying this in your program

Consider a semiconductor startup approaching first product qualification. The finance team is alarmed at $3.7M in NPI/NTI costs for the lead product, and that figure covers only the next few quarters. The company is simultaneously adding eight designers for new projects, travel costs are climbing on fuel prices and the geographic spread of operations, and leadership is launching fundraising-visibility initiatives that consume resources before sufficient funding exists to support them.

Section 04

Applying this in your program

An across-the-board cut would reduce design tool spending, factory travel, and test equipment by the same percentage as conference travel and office costs. Design tools and factory travel directly enable the product qualification that is the company's only near-term revenue path. Cutting them delays the product. Conference travel and office costs do not.

The right response is a three-hour review of current and projected spending with the C-suite. Categorize every line by cost, value to the lead-product launch, and impact on schedule. Protect what advances the mission. Cut what does not. Review discretionary items for scope reduction rather than elimination. Present the result as a decision model, not a political negotiation.

> **Key principle.** Every dollar spent is an investment in getting the product to market. Spending that accelerates qualification is investment. Spending that does not is overhead. When cash is constrained, protect investment and cut overhead. Do not cut both equally.

How to run the session

The lateralworks fastDecision tool implements AHP in a single workbook with automated pairwise comparison, consistency checking, and visual output [11]. The full exercise runs as a three-hour working session with the CFO, COO, and CEO across four steps. Define the single primary business objective (30 minutes). Enumerate every material spending category with current and projected costs (1 hour). Rate each category against cost, value, and schedule impact through pairwise comparisons (1 hour). Read the ranking and make protect / review / cut decisions (30 minutes). The output is a transparent framework that replaces political negotiation with structured analysis.

How this connects to portfolio starts control

The AHP budget exercise lives upstream of the project portfolio. The same machinery — weighted criteria, pairwise comparison, composite ranking — runs at the entry to the active pipeline, where lateralworks recommends a rank-then-gate discipline that protects cycle time against over-commitment [11]. Run the budget exercise and the portfolio exercise back-to-back: the budget result tells you which capabilities are protected; the portfolio result tells you which projects those capabilities will fund. Together they replace two separate political negotiations with one transparent ranking.

A

Case study

2008: a CMP-equipment portfolio rebuilt

In November 2008 the global semiconductor industry entered the sharpest downturn in its history. Fab utilization fell below 50%. Equipment orders collapsed. A market-leader in chemical mechanical planarization (CMP) tools faced the question every equipment company faced: how to cut spending dramatically while preserving the capabilities needed to capture share when the recovery arrived.

Appendix A

CMP-equipment portfolio rebuilt in the 2008 recession

The company did not cut across the board. Instead, it built an AHP decision model and prioritized its entire active portfolio — 66 projects across 18 program areas. The goal was explicit: position the business for share gains in the next upturn while optimizing the cost structure during the downturn. The dual objective — cut now, but cut with a mind to recovery — is the work an across-the-board reduction cannot do.

Decision criteria

Five strategic objectives were defined and weighted through pairwise comparison. The weights captured a forward-looking strategy: nearly half the total weight went to customer penetration with new products — the capability the company would need most when fabs resumed buying.

Strategic objective	AHP weight	Rationale
Penetrate key customers with new products	**47.0%**	New product demos at top-tier fabs build design-in positions that lock in share for years.
Reduce cost structure during downturn	**22.7%**	Immediate survival: lower burn rate to extend runway through the trough without destroying capabilities.
Create new revenue streams	**15.2%**	Mid-term growth: develop adjacencies in new materials and applications for the post-recovery cycle.
Optimize cost per unit shipped	**9.7%**	Operational efficiency: reduce manufacturing and service cost to improve margins when volume returns.
Optimize existing revenue streams	**5.4%**	Lowest weight: existing revenue was collapsing with the market, so optimizing it was less impactful than building for the recovery.

Table A1. Strategic objectives with AHP-derived weights. Customer penetration received nearly half the total weight — a deliberate bet on the recovery.

Portfolio prioritization results

Each of the 66 projects was scored against all five objectives using pairwise comparisons. Composite priority scores ranged from 1.00 (highest) to 0.05 (lowest), producing a clear four-tier action framework.

Tier	Score range	Projects	Action	Examples
Protect	0.80–1.00	16 (24%)	Fully fund	New product beta sites at major fabs, key-customer installed-base support, next-gen polishing head.
Invest	0.60–0.79	6 (9%)	Fund strategically	Platform product main development, process control for flagship product, consumables development.
Review	0.30–0.59	19 (29%)	Reduce scope or defer	New metals/materials R&D, process-module support, metrology development, advanced packaging.
Cut	0.00–0.29	25 (38%)	Eliminate or minimal sustain	Exploratory dielectric research, early-stage new applications, non-critical CIP, employee development.

Table A2. Portfolio prioritization results. Sixty-six projects classified into four action tiers.

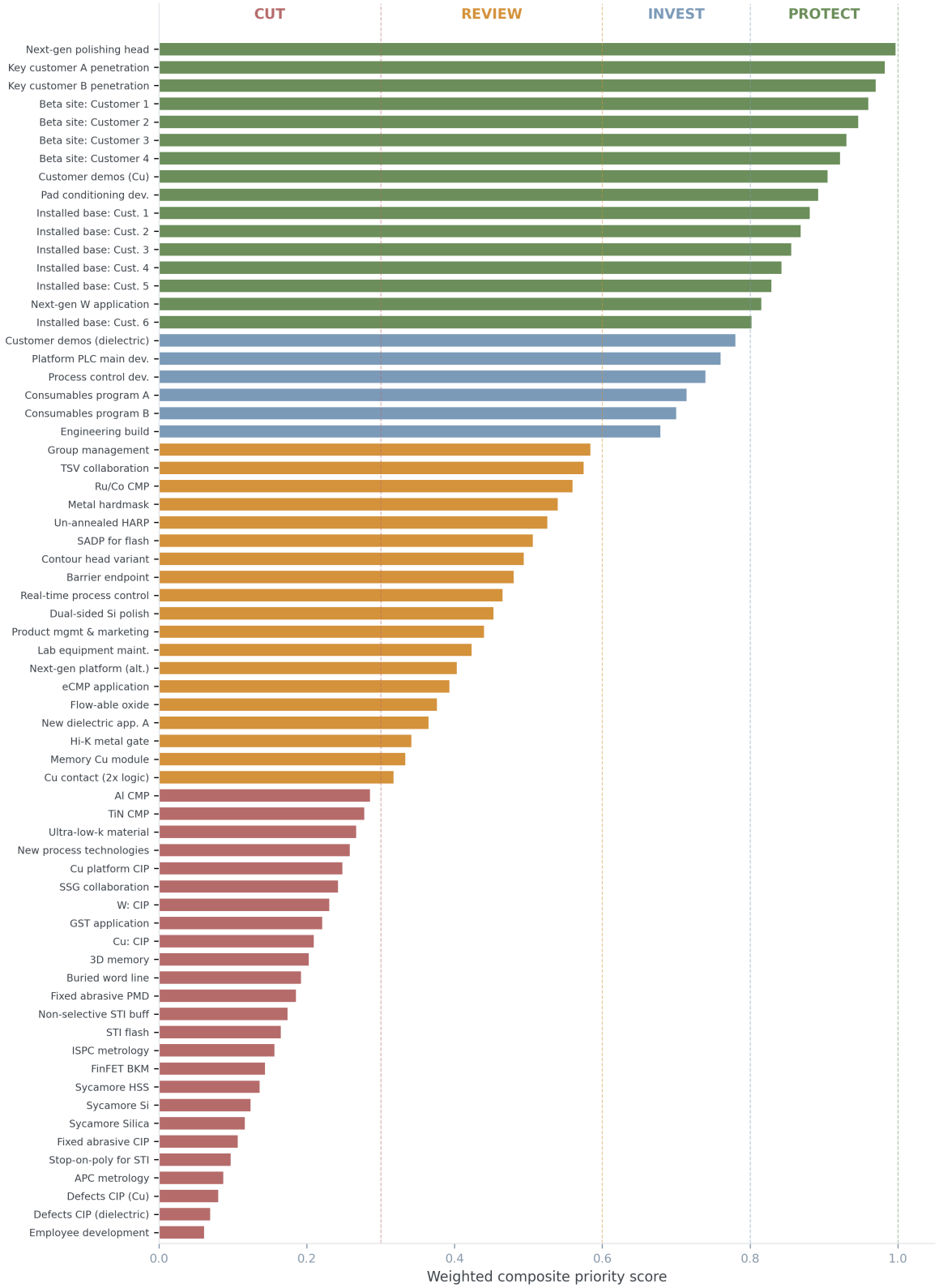

Figure A1. Complete portfolio priority ranking. Each bar is one project, color-coded by action tier. The model marked 25 projects (38% of the portfolio) for elimination, freeing resources to fully fund the 16 projects that would drive share gains in the recovery.

What the model revealed

The ranking exposed a pattern intuition alone would not have surfaced. The highest-priority projects were customer-facing: beta-site installations at leading memory and logic fabs, installed-base support for the top five accounts, and the next-generation polishing head that would define the company's competitive position in the recovery. These projects scored high on customer penetration (47% weight) and moderate on cost — the profile the model was designed to favor.

The lowest-priority projects were internally focused: exploratory research into new dielectric materials, early-stage applications with no near-term customer demand, and infrastructure activities such as employee onboarding programs. These projects scored low on customer penetration and revenue creation — the two highest-weighted objectives — regardless of their technical merit.

The critical insight sat in the middle tier. Several projects that program managers would have instinctively protected — advanced materials R&D, next-generation process modules — fell into the "review" range because their near-term customer-penetration value was low. The model did not recommend eliminating them. It recommended reducing their scope and deferring full funding until the recovery justified the investment. That nuance — reduce rather than kill — is precisely what across-the-board cuts cannot express.

Outcome. The company cut 38% of its project portfolio and reduced scope on another 29% while fully funding the 24% of projects that drove customer engagement during the downturn. When the semiconductor market recovered in 2010, the company had beta tools installed at every major fab, a next-generation platform ready for qualification, and customer relationships that competitors — who had cut indiscriminately — had allowed to atrophy.

Sources

References

[1] Boston Consulting Group. “Less Than Half of Companies Achieve Their Cost Savings Targets,” press release, 18 November 2024. Survey of 2,080 executives in six countries. bcg.com/press/18november2024-companies-cost-savings-targets

[2] Adkins, A., Eulhus, J., and Pattersen, A. “Can You Achieve and Sustain G&A Cost Reductions?” McKinsey & Company, Operations Practice, 2017. Tracked 238 S&P Global 1200 companies; one in four sustained G&A reductions for four years. mckinsey.com/capabilities/operations/our-insights/can-you-achieve-and-sustain-ga-cost-reductions

[3] Saaty, T. L. *The Analytic Hierarchy Process: Planning, Priority Setting, Resource Allocation.* McGraw-Hill, New York, 1980.

[4] Vargas, R. V. “Using the Analytic Hierarchy Process (AHP) to Select and Prioritize Projects in a Portfolio.” Paper presented at the PMI Global Congress 2010 — North America, Washington, DC. Project Management Institute. pmi.org/learning/library/analytic-hierarchy-process-prioritize-projects-6608

[5] Intel Corporation. “Intel Reports Second-Quarter 2024 Financial Results; Announces $10 Billion Cost Reduction Plan to Increase Efficiency and Market Competitiveness.” Press release, 1 August 2024. intc.com/news-events/press-releases/detail/1704

[6] Intel Corporation. Form 10-Q for fiscal quarter ended 28 September 2024, filed with the U.S. SEC. Net loss attributable to Intel of $16.6 billion in Q3 2024; $18.6 billion year-to-date. sec.gov/Archives/edgar/data/0000050863

[7] Niu, E. “Why Intel Stock Fell 60% in 2024.” The Motley Fool, 15 January 2025. fool.com/investing/2025/01/15/why-intel-stock-fell-60-in-2024

[8] NVIDIA Corporation. “NVIDIA Announces Financial Results for First Quarter Fiscal 2025.” Form 8-K, 22 May 2024. Q1 FY25 revenue $26.0 billion, up 262% year over year; Data Center revenue $22.6 billion, up 427% year over year. sec.gov/Archives/edgar/data/0001045810

[9] Apple Inc. Form 10-K for fiscal year ended 29 September 2007, filed with the U.S. SEC. Net income $3.495 billion.

[10] Apple Inc. Form 10-K for fiscal year ended 27 September 2014, filed with the U.S. SEC. Net income $39.510 billion.

[11] lateralworks. “Portfolio Prioritization and Starts Control.” Briefing, May 2026. AHP applied at the entry to the active pipeline; rank-then-gate discipline; implementation in fastProjectAI / fastDecisionAI. lateralworks.com/ideas/portfolio-starts-control-briefing

[12] Bullfincher. “Intel Corporation Revenue per Employee, 2014–2024.” Revenue per employee $704K (FY2020) to $435K (FY2023). bullfincher.io/companies/intel-corporation/revenue-per-employee

[13] Couto, V., Plansky, J., and Caglar, D. “How to Cut Costs More Strategically.” *Harvard Business Review*, March 2017.

[14] Reinertsen, D. G. *The Principles of Product Development Flow: Second Generation Lean Product Development.* Celeritas Publishing, Redondo Beach, CA, 2009.