

The Resource Efficiency & Systems Optimization Authority (RESO)

Abstract

Proposal for the creation of the Resource Efficiency & Systems Optimization Authority (RESO), a central coordination authority within the Executive Office of the President to align data, incentives, and system-level priorities across the U.S. economy.

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1. Overview

The United States does not face a primary shortage of resources, capital, or capability. Rather, it faces a structural efficiency gap driven by how economic systems interact across sectors. Across areas such as food, energy, water, healthcare, transport, and labor, significant economic value is lost not because capacity is insufficient, but because systems operate in fragmented and uncoordinated ways.

This fragmentation produces persistent inefficiencies at the interfaces between sectors—where decisions are made independently despite being economically interdependent. These inefficiencies are systemic, recurring, and largely invisible, yet they represent one of the largest untapped sources of economic value in the U.S. economy, estimated in the range of \$1.7 trillion to \$2.5 trillion annually, based on aggregated sector-level analyses across interconnected systems.

The Resource Efficiency & Systems Optimization Authority (RESO) is proposed as a federal coordination authority designed to address this structural gap. Operating within the Executive Office of the President, RESO introduces a system-level capability to integrate cross-sector data, align incentives, coordinate across institutions, and translate insight into execution—without directly managing industries.

Beyond efficiency gains, RESO introduces a second, equally important capability: coordinated intelligence. By integrating diverse expertise across sectors, it enables complex, cross-system challenges to be addressed at their points of intersection. In modern economies, many of the most persistent problems are not solved within individual domains, but across disciplines. RESO enables these intersections to function, reducing missed opportunities, strengthening public-sector strategy, and allowing coordinated, scalable solutions to emerge across interconnected systems. With the increased data collection and analytic power made possible by low cost communication and Artificial Intelligence (AI), this new organization can bring the power of AI to federal economic policymaking.

2. What RESO Does (Conceptual Role)

RESO functions as a system-level optimization layer across the U.S. economy. It does not replace markets or operate industries; instead, it reshapes the incentive and information environment in which economic actors operate, so that system-wide efficient outcomes become economically rational at the individual level. At its core, RESO ensures that:

- Decisions reflect system-wide constraints, interdependencies, and opportunities—not isolated sector perspectives
- Existing capacity is deployed more efficiently across systems, reducing redundancy, idle capacity, and misallocation
- Inefficiencies at sector interfaces are identified, quantified, and progressively reduced over time
- Economic signals, including incentives, pricing, and policy, are aligned so that system-level efficiency is consistently reinforced

3. How RESO Works (Operating Model)

RESO operates through a continuous system-level execution loop that converts data into action, and action into measurable economic value: Data → Insight → Alignment → Incentives → Implementation → Value Recovery

In practice, RESO integrates cross-sector historical and real-time data into a unified system view, applies predictive modeling to anticipate constraints, demand shifts, and system-level risks, aligns federal policies with private-sector incentives to reflect system-wide priorities, translates insights into implementation through procurement frameworks, standards, and funding mechanisms, enables coordinated execution across sectors through pilot programs, public–private partnerships, and scalable deployment models. This operating model transforms fragmented systems into a coherent, continuously optimized, and adaptive economic framework.

4. Core Functions (Operational Responsibilities)

RESO operates through six core functions:

4.1 System Coordination & Efficiency

- Align cross-sector activity across federal agencies and private actors to reflect system-level priorities
- Reduce inefficiencies at sector interfaces through coordinated planning and execution
- Improve overall resource allocation and utilization across the economy

4.2. Data Integration & Predictive Optimization

- Integrate cross-sector data streams into a unified, system-level view
- Utilization of Artificial Intelligence to increase the speed and comprehensiveness of analysis and projections.
- Leverage historical analysis and real-time monitoring to track system performance
- Apply forward-looking modeling to anticipate risks, constraints, and demand shifts

4.3 Incentive & Policy Alignment

- Align grants, procurement, standards, and policy frameworks with system-level efficiency objectives
- Ensure efficient outcomes are economically rewarded across the private sector
- Influence behavior through coordinated economic signals and regulatory alignment

4.4. Labor Transition & Economic Reallocation

- Anticipate labor displacement driven by technological change (e.g., artificial intelligence)
- Enable workforce redeployment toward high-demand and structurally undersupplied sectors
- Reduce transition lag between displacement and productive reallocation

4.5. Strategic Resource & Supply Chain Resilience

- Identify vulnerabilities in critical resources, materials, and supply chains
- Reduce foreign dependencies through coordinated national strategies
- Strengthen resilience to geopolitical, environmental, and economic disruptions

4.6. Cross-Sector Implementation & Execution

- Translate system-level insights into actionable deployment across sectors
- Coordinate execution across agencies, industries, and regional actors
- Scale solutions through pilot programs, public–private partnerships, and national frameworks

5. Where Value is Lost (System Insight)

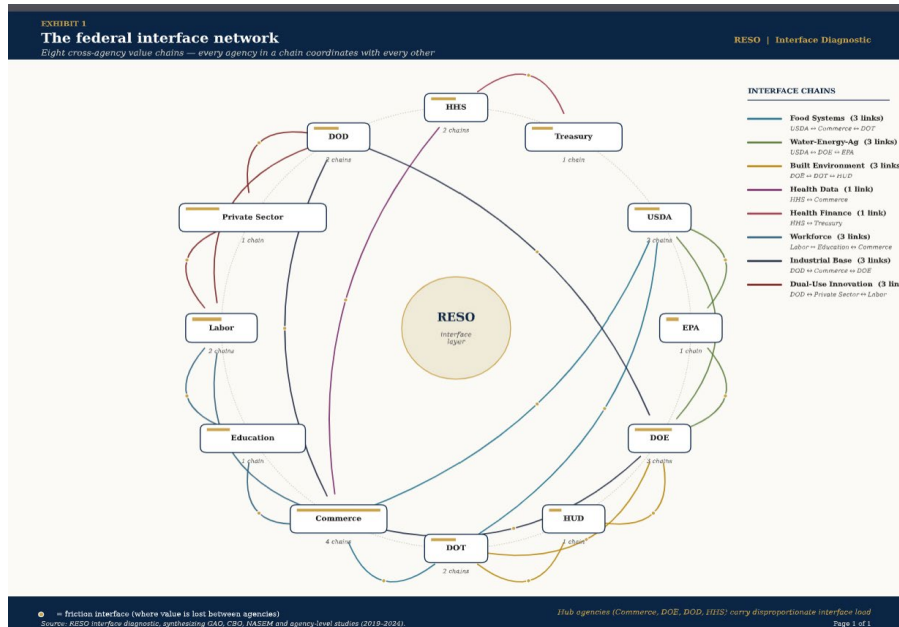
The largest inefficiencies in the U.S. economy are not within sectors, but between them, arising at the interfaces where systems and institutions interact without coordination.

Examples include:

- food production disconnected from demand and logistics
- energy generation misaligned with consumption patterns
- water systems operating independently of energy and agriculture
- healthcare fragmentation across providers, payers, and data systems
- transport inefficiencies due to poor coordination across logistics networks
- labor mismatches driven by delayed adaptation to economic change
- defense system fragmentation across procurement, industrial capacity, research, and civilian innovation ecosystems

At the institutional level, these inefficiencies emerge at the interfaces between federal departments whose mandates are interconnected but operationally fragmented. Key examples include:

- Department of Agriculture (USDA) ↔ Department of Commerce ↔ Department of Transportation
(food production, demand signaling, and logistics coordination)
- Department of Agriculture (USDA) ↔ Department of Energy ↔ Environmental Protection Agency (EPA)
(water allocation, irrigation efficiency, and energy-intensive agricultural systems)
- Department of Energy ↔ Department of Transportation ↔ Department of Housing and Urban Development (HUD)
(energy demand, mobility systems, and building efficiency)
- Department of Health and Human Services (HHS) ↔ Department of Commerce
(healthcare delivery, interoperability, and health data infrastructure)
- Department of Health and Human Services (HHS) ↔ Department of the Treasury
(provider–payer friction, reimbursement complexity, and incentive misalignment)
- Department of Labor ↔ Department of Education ↔ Department of Commerce
(skills development, labor demand, and economic transition)
- Department of Defense ↔ Department of Commerce ↔ Department of Energy
(industrial base alignment, critical materials, and energy dependencies)
- Department of Defense ↔ private sector ↔ Department of Labor
(dual-use technologies, workforce deployment, and innovation transfer)



Title: RESO Interface Architecture: A Cross-Agency Coordination Model for System Optimization

No single actor, public or private, has both the visibility and the incentive to optimize these interfaces. RESO precisely addresses this gap. Of course, this assumes, contrary to Project 2025's prescriptions, that the United States actually wants a more effective and fully competent national government. Our analysis assumes that the destruction of organizational capacity throughout the federal government will eventually be reversed. If and when this happens, the coordination functions proposed here will be timely and appropriate.

6. Economic Impact

The economic opportunity is both significant and achievable.

- Estimated inefficiency pool: approximately \$1.7T–\$2.5T annually in the United States, based on a composite of sector-level studies and conservative aggregation of inefficiencies across interconnected systems (including food, healthcare, energy, transport, water, and labor)
- Realistic recovery target: 10–20% of this value through improved coordination
- Equivalent impact: \$175B–\$500B in annual, recoverable economic value

These estimates are directional and reflect a synthesis of existing sector-level analyses rather than a single unified dataset.

These gains are recurring rather than one-time, compounding over time as system efficiency improves, achievable through better coordination and utilization of existing capacity—not new supply. At scale, this represents approximately 0.6%–1.6% of GDP, with potential to reach ~1.9% as adoption broadens, and system integration deepens.

7. Why This Matters Now

Resource constraints are increasingly structural rather than episodic, driven by:

- Energy volatility and demand–supply misalignment
- Water stress, climate variability, and infrastructure strain
- Supply chain fragility and geopolitical exposure
- Technological disruption, including AI-driven labor shifts

Governments have demonstrated the ability to influence system-wide behavior during crises—for example, through demand-side energy measures and coordinated consumption reductions—but these responses remain reactive, fragmented, and temporary.

- RESO institutionalizes this capability by: shifting from episodic crisis response to continuous system-level optimization
- embedding efficiency, coordination, and foresight into the normal functioning of the economy

8. Strategic Value Beyond Efficiency

Beyond productivity gains, RESO introduces a second critical capability: Coordinated Intelligence (Unity of Mind). Modern economic challenges increasingly emerge at the intersection of sectors rather than within them. Examples include:

- energy, water, and infrastructure systems
- defense, industry, and artificial intelligence
- labor, technology, and education systems

These challenges are not constrained by institutional boundaries and cannot be effectively addressed within isolated domains.

RESO creates a structure where expertise across domains is integrated into a unified system-level perspective, innovation emerges from coordinated, cross-sector insight rather than isolated analysis, solutions are designed and scaled across systems, rather than remaining confined within silos. In this way, RESO functions as a platform for coordinated intelligence, where the integration of perspectives becomes a source of strategic and economic advantage.

9. Fragmented Coordination and the Absence of System-Level Optimization in U.S. Federal Governance

The U.S. federal coordination architecture operates across four institutional layers. Each performs part of the work that system-level optimization requires; none performs all of it.

The first layer sits within the Executive Office of the President and includes OMB, the NEC, OSTP, the DPC, CEQ, and the NSC. These bodies align policy and set strategic direction, but their mandates are advisory rather than operational. The second layer consists of interagency mechanisms: task forces, working groups, and entities such as the Federal Permitting Improvement Steering Council. These are issue-specific and time-bound, and they dissolve once their originating mandate ends.

The third layer consists of oversight and analytical institutions, principally the Government Accountability Office and the Congressional Budget Office. They diagnose fragmentation and inefficiency rigorously, but they hold no authority to resolve what they find. The fourth layer consists of the line agencies, USDA, DOE, DOT, HHS, and others. Each is optimized within its own mandate and operates largely independently, which produces persistent inefficiencies at the interfaces between sectors. Coordination, analysis, and execution capabilities all exist in this architecture, but they exist in isolation from one another. No institution is designed to integrate them into a continuous, system-level optimization framework. That is the gap RESO is designed to fill.

The Four-Layer Federal Coordination Structure:

- EOP coordination bodies: OMB, NEC, OSTP, DPC, CEQ, NSC
- Interagency mechanisms: task forces, FPISC
- Oversight and analytical bodies: GAO, CBO
- Line agencies: USDA, DOE, DOT, HHS, and others

The closest existing analogue to RESO is the set of coordination bodies within the Executive Office of the President, particularly the NEC and OSTP, because, like RESO, they sit at the center of government and work across agencies to align priorities; however, they remain primarily advisory and policy-coordinating, whereas RESO is fundamentally different in that it operates as a continuous system-level optimization engine, integrating cross-sector data, aligning incentives, and driving execution across agencies and the private sector in real time. In contrast, interagency task forces, oversight bodies like GAO/CBO, and line agencies are not meaningful comparisons: task forces are temporary and narrow, oversight bodies are analytical and backward-looking, and line agencies operate in sector silos—none have the mandate, tools, or architecture to optimize interactions *between* systems, which is precisely the structural gap RESO is designed to solve. It is likely that some of the functions and policies proposed by RESO will require legislation and so one function of the Authority will be to propose legislation in active communication with Congress.

10. Comparison to Existing Federal Coordination Bodies

A reasonable first objection to RESO is that the Executive Office of the President already contains bodies performing adjacent functions: coordination, policy alignment, and strategic oversight all exist in some form today. Before accepting that a new authority is warranted, it is necessary to test RESO against these existing bodies and ask whether it represents a redundant layer or a structurally new capability. This section maps RESO against the four most relevant incumbent bodies - OMB, NEC, OSTP/NSTC and CEA - and against GAO's fourteen-year body of work on federal fragmentation to identify the specific structural gap RESO is designed to fill.

10.1 Office of Management and Budget (OMB)

OMB is the largest and most powerful office in the EOP. Its five core functions are budget development and execution; management oversight of agency performance, procurement, financial management,

and IT; coordination and review of significant federal regulations; legislative clearance; and clearance of executive orders and presidential memoranda. OMB is rightly described as the implementation and enforcement arm of presidential policy.

What OMB does well that overlaps with RESO. OMB is the only EOP body with agency-wide budgetary authority. Through Circular A-11 and the annual budget cycle it can influence virtually every federal program. In emergencies, OMB has historically orchestrated multi-agency responses.

Where OMB is structurally unsuited to RESO's mission. OMB's orientation is fiscal and managerial, not operational. Its program examiners evaluate agency budget requests; they are not positioned to model cross-sector physical flows (energy–water–agriculture interdependencies, healthcare data interoperability, freight logistics capacity). OMB operates on an annual budget rhythm; the optimization RESO proposes is continuous. OMB also lacks domain-specific analytical capacity, it relies on agencies themselves for technical data, which means it inherits rather than resolves the fragmentation.

10.2 National Economic Council (NEC)

The NEC was created in 1993 to coordinate policy-making for domestic and international economic issues, advise the President on economic policy, ensure program consistency with the President's economic goals, and monitor implementation of the President's economic agenda.

What the NEC does well that overlaps with RESO. The NEC is the established interagency economic-coordination forum, an "honest broker" convening agency principals. When GAO recommended a national broadband strategy in 2022, it directed the recommendation to EOP through the NEC, reflecting the NEC's role as the coordinating body for cross-agency economic issues.

Where the NEC is structurally unsuited to RESO's mission. The NEC is a small, advisory policy-coordination body, not an operational analytic one. It is a forum for the principals of existing agencies, not an independent source of cross-sector modeling or data integration. Its influence is notoriously dependent on the President's agenda and the level of trust placed in its director; institutional scholarship (Mayer 2021; Dolan 2003) shows NEC influence tends to fall off with subsequent directors within an administration. The NEC cannot build and sustain the multi-year data and modeling infrastructure that cross-sector optimization requires.

10.3 Office of Science and Technology Policy (OSTP) and NSTC

OSTP was established in 1976 to coordinate federal R&D programs and policies and evaluate the scale, quality, and effectiveness of federal science and technology efforts. The National Science and Technology Council (NSTC), which OSTP chairs, is the formal Cabinet-level mechanism for interagency S&T coordination.

What OSTP does well that overlaps with RESO. OSTP is the existing home of technical, cross-agency analytical capacity in the EOP. It coordinates across the 30+ agencies that fund R&D and is the natural partner for cross-sector initiatives involving AI, biotechnology, and emerging technology.

Where OSTP is structurally unsuited to RESO's mission. OSTP's mandate is science and technology policy, not the economy as a whole. It has no authority over food, water, transport, healthcare delivery, labor markets, or supply chains except where those intersect with R&D. GAO has repeatedly criticized the effectiveness of the OSTP/NSTC coordination model and urged OSTP to more effectively use NSTC subcommittees to sustain coordination of cross-cutting priorities (CRS R47410, 2023). Congressional research has noted that some experts regard NSTC as having insufficient authority over the federal agencies engaged in science and technology activities, a structural weakness that any new coordination body must address head-on.

10.4 Council of Economic Advisers (CEA)

The CEA, established by the Employment Act of 1946, is a small body of academic economists providing analysis to the President. The distinction between CEA and NEC is important: the CEA serves as the White House's internal consultancy for economic analysis, while the NEC is the vehicle for policy development.

Relevance to RESO. The CEA produces macroeconomic analysis but is neither operational nor sectoral. It would be a natural analytical partner to RESO but cannot substitute for it.

10.5 The Evidence That Existing Bodies Are Not Sufficient

The strongest evidence that the current coordination architecture is inadequate comes from the Government Accountability Office. Since 2011, GAO has been statutorily required to identify fragmented, overlapping, and duplicative federal programs. Across fourteen annual reports, GAO has identified more than 2,000 matters and recommendations; congressional and agency action has yielded approximately \$667 billion in cost savings and revenue increases, with tens of billions more in identified but unrealized savings (GAO-24-106915, 2024; GAO-25-107604, 2025).

GAO has directly flagged the limits of current coordination bodies. Its 2023 report noted that a national broadband strategy was needed to manage fragmented efforts across 15 federal agencies and more than 130 programs, and that fragmentation across more than 30 federal entities involved in disaster recovery continues to impair service delivery. GAO has made recommendations to Congress and to OMB specifically aimed at strengthening interagency collaboration — an implicit acknowledgment that OMB itself, as currently structured, is not resolving the problem.

10.6 The Structural Gap RESO Is Designed to Fill

RESO Function	Closest existing body	Structural gap
System coordination & efficiency	NEC (economic), OSTP/NSTC (S&T)	Neither covers physical/operational systems across sectors; both are advisory, not analytical
Data integration & predictive optimization	None	OMB, NEC, and OSTP lack cross-sector data infrastructure and modeling capacity

Incentive & policy alignment	OMB (budget), OIRA (regulation)	OMB aligns fiscal incentives; no body aligns market and regulatory incentives against system-level physical objectives
Labor transition & reallocation	DOL, NEC (fragmented)	No standing body anticipates displacement across sectors and coordinates reallocation
Strategic resource & supply-chain resilience	NSC, Commerce, DOE (fragmented)	Split across national-security and commerce lenses; no economic-system owner
Cross-sector implementation	OMB (fiscal), agencies (operational)	No body translates cross-sector insight into coordinated execution at operational tempo

In short, the OMB has authority but not the analytical or operational orientation, the NEC has the coordinating role but not the analytical depth or continuity; OSTP has technical capacity but a narrow mandate; and the CEA provides analysis but not coordination. RESO is designed to occupy the intersection - combining durable cross-sector analytical capacity (stronger than NEC or OMB), a broad economic mandate (wider than OTP), and an operational orientation (absent in CEA).

Conclusion

RESO represents a structural advancement in how economic systems are understood, coordinated, and optimized at the national level. By integrating data, aligning incentives, coordinating across sectors, and enabling execution, RESO could convert fragmentation into coherence and inefficiency into measurable economic value. It could transform how decisions are made, from isolated optimization within silos to coordinated optimization across systems.

Beyond efficiency gains, RESO introduces a second, equally important capability: coordinated intelligence. By integrating expertise across sectors and aligning perspectives, it enables solutions to emerge at the intersections where modern challenges increasingly reside, reducing missed opportunities and strengthening strategic decision-making across the public and private sectors.

This capability extends beyond productivity. It enables the United States to anticipate and manage structural transitions more effectively, including technological disruption, resource constraints, and evolving global dependencies. It supports workforce redeployment, strengthens domestic supply chains, and enhances resilience to geopolitical and environmental shocks.

- In doing so, RESO offers a scalable path to: higher national productivity through improved resource utilization and system efficiency
- stronger resilience across energy, water, supply chains, and critical infrastructure
- more adaptive labor markets with faster and more targeted workforce reallocation
- reduced strategic vulnerabilities through coordinated management of critical resources and dependencies
- sustained long-term economic performance driven by continuous system-level optimization

At its core, RESO reframes economic performance not as a function of additional resources, but as a function of how effectively existing systems are aligned and coordinated. It represents a shift from

managing sectors in isolation to managing the economy as an interconnected system—unlocking value, resilience, and innovation at scale.

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