The Anatomy of Modern Power: Infrastructure, Authority, and Speed

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The fundamental purpose of economic organizations is to create governance structures that minimize transaction costs in the face of bounded rationality and opportunism[1]. Unless a new strategy that consolidates this objective is formulated, or a new organizational structure aligned with the existing strategy is established, the efficient allocation of resources will inevitably deteriorate, institutional performance will decline, and complexity will ultimately destroy efficiency.[2] Organizational evolution, at its core, is not a struggle for power but an optimization of decision rights that ensures decision authority reaches the point where knowledge is produced with the lowest cost and highest speed.[3]

The Infrastructure Theory of Modernity

16th century. The Ottoman Empire. Within the world system of its time, it was not merely a regional power but one of the principal determinants of a multicentered geopolitical order connecting Europe, Asia, and Africa. A vast structure that simultaneously controlled energy corridors, trade routes, and financial flows. An actor that effectively shaped global law and occupied a rule-setting position. Its army was not only a deterrent but a force capable of achieving outcomes without fighting.

Had it existed today in that position, it would most likely be a central power defining the global order. In terms of military capacity, logistical superiority, population size, and even its limited ability to collect taxes, the Ottoman Empire was comparable to the hegemonic actors of its era.[4] So what happened that, within just a century, it was driven into a major decline and eventually to dissolution?

Yes, the Ottoman Empire was a great hegemony[5]. However, this hegemony was built not on institutional or systemic power in the modern sense, but on a form of rule grounded in land, population, and personal sovereignty. The rationality of the state was suited to a world in which production was slow, knowledge was local, and technological breakthroughs were limited. For this reason, the power of the Ottoman Empire in the 16th century was not exceptional in the pre-modern world order; on the contrary, it was internally consistent.

With the 17th and 18th centuries, the Enlightenment that emerged in the West signified not only a philosophical or scientific transformation, but also a redefinition of the logic of the state and authority. The institutionalization of knowledge—detaching it from individuals and court circles and embedding it in academies, measurement systems, and standards—made it possible for governance to rely on rules and procedures rather than personal will. In this process, the state ceased to be merely a ruling authority and transformed into an organism that builds infrastructure, regulates economic flows, and governs social relations through both abstract and concrete systems.[6] States possessing this capability began to be defined as "modern states."

Here, it may be necessary to briefly explain modernism from the perspective of governance ideology, since multiple definitions of modernism are possible. Within this framework, modernism can be understood as a mode of governance that constrains the arbitrary use of authority, binds decision making processes to rules, and aims to reduce the distance between where knowledge is produced and where decisions are made. It argues that the permanence of this rationality depends on infrastructures capable of accelerating the flow of information. Because such infrastructures both increase the implementability of decisions and embed rules into systems rather than making them dependent on individuals. For this reason, modernism is not merely an intellectual transformation, but the construction of an infrastructural capacity that scales this transformation.

In the Ottoman Empire, decision making processes, although remaining centralized, failed to evolve into data driven, institutionally repeatable, and autonomous structures. Reforms largely remained reactive and emerged as patches aimed at preserving the existing order rather than internalizing the paradigm of modern governance.

By the 19th century, the Industrial Revolution fundamentally transformed the concept of power. Authority was no longer measured by territorial extent, but by the capacity to control economic, logistical, and informational flows. European states transformed the state into a kind of infrastructure platform by designing railways, banking systems, insurance mechanisms, telegraph networks, and modern legal orders in an integrated manner. This platform enabled the scaling of capital, labor, and knowledge. The Ottoman Empire, by contrast, remained in a position of importing infrastructure, financing it through external debt, and maintaining legal and administrative structures in a fragmented and multi-layered form[7]. As a result, it ceased to be a decisive actor in the global system and became an average object of balance of power politics among great powers.

In the 20th century, the rise of the United States made the distinction between classical empires and modern hegemony even more visible. The United States' decisive advantage lay not in military capacity, but in institutional continuity, standardized governance, and the ability to design infrastructure as a scalable system. Transportation, energy, communication, and financial infrastructures were structured to operate in harmony with one another, and the state positioned itself not as the direct manager of these networks, but as their orchestrator. This was precisely the fundamental transformation that the Ottoman Empire failed to achieve in its modernization process.

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[1] *Oliver E. Williamson, (1985), Transaction Cost Economics, The Economic Institutions of Capitalism, s: 15*

[2] Alfred D. Chandler Jr., (1962), Strategy and Structure: Chapters in the History of the Industrial Enterprise, M.I.T. Press

[3] Jensen, M. C., & Meckling, W. H. (1992). Specific and General Knowledge, and Organizational Structure". Contract Economics, ss. 251-274. Oxford: Basil Blackwell.

[4] https://en.wikipedia.org/wiki/Ottoman_Empire#cite_note-84

[5] It is the establishment of decisive superiority over others not only through the use of force, but also by setting rules, producing legitimacy, and generating consent.

[6] There are still governments today that misunderstand this. Ignoring the intellectual and philosophical foundations of the Enlightenment and believing that such a transformation can be achieved merely by building dams, highways, and large shopping malls is, unfortunately, a consequence of failing to grasp the importance of reason, science, and planning. Without rationality and the scientific method, institutionalization cannot exist. And where there is no institutionalization, sustainable prosperity cannot be produced.

[7] From 1854 onward, the debts that were incurred became unsustainable, and in 1881 the Düyun u Umumiye Administration (Public Debt Administration) was established. A significant portion of tax revenues effectively came under the control of creditor states. Moreover, within the same territories, Sharia law, customary law, and capitulations operated side by side. This prevented the central authority from establishing legal singularity, whereas Europe had long since simplified and unified its legal system through the Code Napoléon, institutionalizing a mode of governance based on rules rather than individuals.

The near erasure of the Ottoman Empire from its hegemonic position in the 16th century within just a few centuries cannot be explained by a superficial narrative of backwardness or a simple delay in adopting technology. Moreover, the Ottoman Empire is not the only historical example to have experienced such a fate. For instance, Spain, which in the 16th century became one of Europe's wealthiest and most militarily powerful states thanks to the immense inflow of silver and gold from the American continent, failed to transform this wealth into productive infrastructures and institutional structures. Because economic power could not be integrated with industrial, financial, and commercial infrastructures, it flowed into short term military expenditures and court centered governance. As a result, despite its wealth, Spain gradually drifted away from the center of the modern system. The Qing Dynasty, the Mughal Empire, the Polish–Lithuanian Commonwealth, the Austro Hungarian Empire, the Mongol Empire, and the Soviet Union[8] can also be cited as other major empires that shared this fate.

When these examples are read together, a common historical pattern emerges. Military superiority, territorial expansion, or ideological unity alone do not produce sustainable power and authority. What makes power enduring is the design of infrastructure through governance in a way that is scalable, self renewing, and capable of integrating new actors into the system. To the extent that the Ottoman Empire and similar polities failed to realize this transformation, they were unable to carry their historical weight into the modern world. The fundamental rupture lies precisely in the failure to grasp the infrastructure centered conception of governance that emerged with modernism. Infrastructure could not be positioned as a productive economic platform and was instead treated largely as a secondary element serving military and administrative needs. Roads, ports, fiscal structures, and legal orders failed to acquire a scalable, self reproducing coherence. This led authority and power to concentrate in temporary decisions, while institutional memory, data driven decision making, and autonomously functioning mechanisms failed to develop. As a result, a state structure emerged that was unable to build its own infrastructure, increasingly relied on external provision, failed to manage economic flows, and ultimately became dependent on those very flows. In other words, despite their formidable power and vast territories, these empires were compelled to exit the role of decisive actors in global power relations because they could not establish a system that administratively integrated their productive mechanisms.

The Authority Theory of Modernity

Authority is the capacity of an individual or an institution to make decisions and have those decisions implemented without the use of force, because it is recognized as legitimate. The most important distinction between authority and power is that while power refers to the capacity to act, authority involves the legitimacy of that capacity and its exercise on the basis of consent. Within this framework, alongside infrastructure, another equally decisive element in governance is how authority is positioned and for what purpose it is exercised.[9]

The transformation that emerged in Britain after the Industrial Revolution offers a historical example of repositioning authority away from a power that makes every decision centrally and toward a role that enables actors who possess domain expertise. The British state, together with the institutions operating alongside it, recognized early on that the technical complexity of production processes could not be governed through political or aristocratic decision making mechanisms.

1. **Glorious Revolution**
   Royal authority was constrained, and the security of property and contracts was ensured. This made it possible for technical and commercial actors to invest without being subject to political arbitrariness.
2. **Royal Society**
   The production of knowledge was detached from the court. Scientific authority was grounded not in nobility or governance, but in evidence and method.
3. **Bank of England**
   Fiscal authority was separated from the personal treasury. The state became not the manager of money, but the enabler of the monetary system.
4. **Factory Acts**
   The state did not directly manage production; it set the boundaries and the rules. Decisions on how to produce were left to engineers and enterprises.

In Britain, authority evolved from being a command issuing center into a structure that established the ground on which the right actors could make the right decisions. This represents an early historical manifestation of modern governance. From steam engines to textile looms, from railway engineering to shipbuilding, critical decisions across many fields were made directly by engineers, craftsmen, and technical entrepreneurs. Rather than deciding what should be done and how, the state positioned itself as an actor that provided the legal, financial, and infrastructural framework that made these decisions implementable. This approach decisively increased the speed and efficiency of production. For example, while Britain's average annual growth rate was around 0.2–0.3 percent in the 1700s, it rose to the 1.5–2 percent range in the first half of the 19th century. The primary source of this increase was not population growth, but productivity.[10]

In this model, the role of administrators was not to establish a supervisory mechanism that questioned or substituted technical decisions, but rather to clearly define budgetary, security, and general governance boundaries and then remove the structural obstacles standing in the way of the process. As noted earlier, the determination of railway routes based on engineering considerations, the optimization of production methods in factories by on site experts, and the shaping of financing models in accordance with these technical realities are concrete outcomes of the delegation of authority grounded in knowledge. What proved decisive in Britain's acquisition of a global competitive advantage was the central authority's ability to withdraw at the right point, liberate technical capacity, and flawlessly implement the intellectual and structural infrastructure required to swiftly eliminate the obstacles facing that capacity.

These historical examples point to governance lessons that are directly applicable to contemporary organizations. The continual top down questioning or moderation, under the guise of governance, of architectural, infrastructural, or engineering decisions reached through consensus by technical teams tends to slow production and innovation rather than secure them. In modern organizations, the primary responsibility of managers is instead to remove bureaucratic, budgetary, or organizational barriers that obstruct technically sound solutions and to

[8] Although the Soviet Union built a vast industrial and military infrastructure, this infrastructure rested on a governance model based on rigid central planning and lacking flexibility. The system was deprived of feedback mechanisms capable of adapting to changing economic and technological conditions. Management was strong, but governance was fragile. As a result, infrastructure ceased to function as a platform that continuously sustained production and instead became a burden that the system itself could not carry.

[9] At this point, the distinction drawn by Niccolò Machiavelli in The Prince (Il Principe) is illuminating. Machiavelli identified early on that power cannot be sustained through the use of force alone, and that durability is made possible through perceptions of legitimacy and the production of consent. For him, the ruler's strength does not stem from the capacity to instill fear, but from the ability to sustain order and provide predictability. This perspective aligns closely with the modern understanding of governance. Authority is not a coercive apparatus that intervenes constantly; it should function as the invisible foundation behind the rules and institutions that enable the system to operate. The balance that Machiavelli intuitively described became concrete in the modern world through institutional infrastructures and procedures that replaced personal leadership, embedding authority not in individuals but in functioning systems.

[10] Angus Maddison, The World Economy: A Millennial Perspective

provide enablement for the process[11].
As in the Industrial Revolution, sustainable success today emerges not from a managerial rationality that seeks to decide everything, but from a governance approach that delegates authority within well defined boundaries and systematically empowers expertise.

The Speed Theory of Modernity

We have tried to explain how power is constructed and sustained through the infrastructural and authority dimensions of modernism. To fully understand modernism, however, it is also necessary to grasp its third and often overlooked dimension: speed, and how power is reproduced through speed, how it adapts, and how it is transformed into competitive advantage. Here, speed should not be understood as physical motion or haste. Rather, it refers to the shortening of decision making, implementation, and feedback loops, which constitutes the speed theory of modernism. From the perspective of evolutionary economics in today's modern world order, the observation that systems which learn and adapt the fastest, rather than those that are merely the largest or strongest, generate sustainable competitive advantage clearly demonstrates the validity of this claim.

In pre modern empires, time was inherently slow. Information was limited, feedback arrived late, and decisions were largely concentrated at the center. This structure was rational for static or slowly changing worlds. In large empires such as the Ottoman Empire, it could take months or even years for a decision to reach the center, be evaluated, and then be transmitted back to the field. This delay did not pose a problem within pre modern production tempos, because competition, technology, and social transformation were all relatively slow.

With the Enlightenment and the Industrial Revolution, this balance was fundamentally disrupted. The frequency of technological innovation increased, production scaled, markets expanded, and competition intensified. In this new world, structures that made decisions slowly became disadvantaged. The modern state and modern institutions began to be defined precisely at this point by their capacity to generate speed. Speed was no longer achieved through individual reflexes, but through the design of systems.

Modernizing states in Europe took three fundamental steps to increase speed. First, they multiplied decision making points. The center was no longer a structure that decided everything; local administrations, independent institutions, expert councils, and technical authorities were brought into play. This made it possible for decisions to be taken at the point closest to the problem. Second, they automated recurring decisions through standardization. Units of measurement, technical standards, legal procedures, and accounting systems were designed to function without the need for individual interpretation. Third, they strengthened feedback mechanisms. Through market prices, statistics, reporting systems, and audit structures, as well as feedback from producers, investors, the workforce, and consumers, errors were not corrected solely through central reports but were rapidly identified through information flowing from all market stakeholders, and corresponding on site solutions were implemented immediately.

The Digital Reflections of Modernism Today

Can this historical trajectory be directly linked to the governance and organizational practices of today's technology companies? Is the same historical logic still testing companies today?

We indeed observe that today, large companies that place technology at their core are compelled to build platforms that enable production to emerge through fast and agile processes while selling products. In this sense, it would not be incorrect to define platform engineering as the most advanced and systematic manifestation in the digital age of the modernist production logic centered on infrastructure, authority, and speed. Just as railways, ports, electrical grids, and banking systems in the 19th century not only accelerated production but also made the formation of shared markets possible, platform engineering performs a similar function today through software, data, and service infrastructures.

This transformation also redefines where authority should be positioned in the digital age. In companies operating with a platform logic, authority can no longer function as a decision center that constantly intervenes in the content and technical details of production. In domains such as software, data, and distributed systems, the correct decision emerges from technical knowledge closest to the context, independent of hierarchical position. For this reason, in modern digital organizations, authority ceases to be a force that specifies what should be done step by step and instead becomes a provider of a framework that defines the principles, boundaries, and shared standards within which decisions can be made. Areas such as security, budget discipline, compliance, and strategic direction form the boundaries of this framework, while the authority to produce technical solutions is deliberately delegated to expert teams.

Within this approach, the success of governance is measured not by the centralization of decisions, but by whether decision making capacity is distributed to the right places. Platforms prevent teams from repeatedly grappling with the same infrastructural problems, while also creating an environment in which managers are not forced to make micro level decisions. Here, the role of authority is positioned not in controlling or questioning, but in removing the organizational, bureaucratic, and structural obstacles that stand in the way of technically sound decisions reached through collective reasoning. Just as states in the 19th century enabled economic activity by building shared markets and infrastructures rather than directly managing production, companies in the digital age must reposition authority not as a control instrument but as an enablement mechanism that makes production possible. Authority does not withdraw, but changes direction, evolving from direct intervention toward the design of the rule sets that allow the system to function.

The platform engineering approach carries a meaning far beyond increasing the short term efficiency of individual products or teams. Its core function is to standardize the ground on which production takes place, making it scalable, repeatable, and collective. Through shared identity systems, common data infrastructures, automated delivery pipelines, and clearly defined governance rules, different teams can operate simultaneously within the same technical and economic space. This not only reduces transaction costs, but also transforms innovation from the limits of individual capabilities into an institutional capacity. In this way, the governance logic of modernism ceases to be merely an organizational model that produces more products. It evolves into a structure capable of continuously reproducing production itself, rapidly integrating new actors into the system, and unifying markets beyond national boundaries. This is where the strategic value of platform engineering truly emerges: by making infrastructure invisible yet indispensable, it accelerates production, deepens shared markets, and turns economic power from the outcome of isolated successes or individual decisions into the natural result of functioning systems.

[11] Modern paradigms such as DevOps and ITIL v4 are fundamentally built on the same principle: the role of management is not to make decisions on behalf of those doing the work, but to systematically create the conditions that enable the work to be done correctly. While DevOps broadly aims to accelerate feedback loops, ITIL v4 moves away from traditional control and approval driven IT management and places value streams, continuous improvement, and co-creation of value at its core. In both approaches, the common denominator is the redefinition of authority not as a supervisory upper layer, but as an enablement mechanism that makes autonomy possible within safe boundaries. For this reason, modern governance is concerned with establishing an organizational architecture that does not escalate technical decisions upward, but instead enables decisions made at the right place to be implemented rapidly.

Where decision making authority and control mechanisms should be positioned?

The modern state's capacity to produce infrastructure and sustain it rests largely on this understanding of governance. When we examine the Ottoman case through this distinction, it becomes clear that the core problem was not weak management, but the failure to establish governance. Decision making authority remained centralized, yet the infrastructural and institutional mechanisms required to operate these decisions continuously, at scale, and independently of individuals could not be developed. As a result, the state lost the flexibility needed to adapt to changing economic and technological conditions and, instead of building a system that regulated the flows decisive in the modern world, became a structure that merely reacted to those flows. In our view, this distinction is not only a historical observation, but also a structural lesson that is directly applicable to contemporary institutions and technology companies.

Let us broaden the discussion by examining how this mechanism operated in some historical governance models and by comparing them with today's technology management standards. Because although these models have historically been packaged around ethical values or social utopias, once these normative layers are stripped away, the reality that emerges is nothing other than the architecture of how decision authority is distributed. One could even argue that nearly every "ism" is, at its core, a governance algorithm that defines who holds managerial power, how decision making mechanisms are centralized[12], and through which instruments legitimacy is produced. In other words, each "ism" constitutes a form of political source code that specifies the nodes in which power is clustered, how it is structured as a data model, and through which APIs it flows. These algorithms not only organize social order, but also form the invisible skeleton of the technology governance models that construct today's digital universe.

The concepts we use when discussing a software lifecycle or an infrastructure management model—such as process, approval, or autonomy—are in fact the technicalized forms of concepts like centralization, bureaucracy, and freedom[13] that have been debated in political arenas for centuries. **Therefore, understanding the evolution of technology management is not so much about a technical change as it is about understanding how initiative and responsibility are delegated to the most appropriate points in order to increase an organization's agility in terms of infrastructure, authority, and speed.**

To grasp this idea from a broader perspective, let us momentarily step away from today's noise and imagine that we are looking at history from a distance, trying to understand certain governance ideologies. From this wide angle, we can see that feudalism was a form of governance in which power and authority were distributed across regional economic units, with control largely concentrated in the hands of local actors. Rather than being centralized, power was dispersed across territories, and oversight and resources were held by local lords or nobles. **Instead of the absolutism of a central state authority, a micro governance model based on personal loyalty and patronage networks prevailed.** Within this structure, change—that is, decision making—advanced at a slow pace in which rigid hierarchies and the preservation of the status quo dominated, while control and oversight were left entirely to the initiative and sovereignty of local actors within their own boundaries. Interestingly, this approach closely resembles many management processes found in organizations today. Among managers who know one another, decisions are often accelerated through personal relationships, informal channels, and trust based on familiarity. For those outside this network, however, the same processes become rigid, slow, and entangled in multi layered formal procedures. As a result, two parallel orders emerge within the organization: one invisible and fast moving structure operating through relationships, and another bureaucratic mechanism that is rule bound, heavy, and unpredictable. While this dual structure may appear to solve certain issues in the short term, in the long run it undermines institutional fairness, hinders scalability, and makes decision making capacity dependent on individuals.[14]

With the Industrial Revolution following the Enlightenment and the rise of modernity, governance algorithms underwent a fundamental mutation. Authority shifted away from land based local lords toward a new class that controlled the means of production, capital flows, and market dynamics—namely, capitalism. In this phase, power was reorganized through property rights and the invisible hand of free trade, while the nature of governance moved from loyalty to contracts and profit maximization.

In other words, personal favors gave way to contracts, and personal trust was replaced by procedural requirements. This increased speed and scale, but also produced coordination problems. Within institutional structures, teams began to optimize for their own objectives and success metrics, while shared architecture, common priorities, and horizontal alignment mechanisms weakened. As a result, some teams accelerated by using processes and resources more effectively, while others—despite having similar capabilities—slowed down due to more complex approval chains and limited access. Thus, an asymmetry of speed and impact emerged within organizations, driven not by performance but by process design. This created persistent problems in terms of scalability and overall efficiency.

Models such as Socialism and Fascism[15], which emerged with the claim of disciplining the chaos and inequality produced by this dynamic at the macro level, instead chose to reconsolidate power within a massive central apparatus.[16] In these systems, legitimacy was derived from the sacrifice of individual initiative and local autonomy in the name of order, collective goals, and ideals of efficiency. The algorithm was now written in central planning offices and imposed on all units with an obligation of absolute conformity.

In this approach, we see that all authority is concentrated in a single center with the claim of eliminating inter team differences and fragmented decision making practices within organizations. Although the stated objective in such structures appears to be achieving speed and equality, in practice technical and architectural decisions are tied to the approval of central operational boards, and the capacity of local teams to generate context specific knowledge and exercise initiative is systematically suppressed. As a result, organizational variation and flexibility diminish, feedback loops lengthen, and the distance between decision and implementation widens. This centralized structure, established with the ambition of controlling chaos and oversight, gradually transforms into an organizational form that loses its ability to adapt, experiences a decline in learning speed, and becomes increasingly fragile in the face of change.

As can be seen, as autonomy is relinquished in systems and processes, centralization increases. As centralization grows, coordination costs rise, response times to environmental change lengthen, and systems become

[12] or how it is distributed

[13] and we should not overlook the coordination and strategic focus principles that have been refined over centuries for organizational efficiency.

[14] When infrastructure and shared platforms are absent, knowledge and authority cluster in local nodes, and each team or manager develops their own narrow boundaries and access privileges. Another hallmark of a feudal order is the personalization of sources of legitimacy. In the absence of infrastructure and platforms, technical decisions are often left to the discretion of individual leaders, small groups, or vendor relationships. Contrary to the principle that decision rights should reside closest to the context, this leads to decisions concentrating in forms that are closest to the context yet also the most personal and least accountable. As a result, internal transparency declines, reproducibility and security weaken, and the technology ecosystem becomes increasingly fragile.

[15] or earlier mercantilism

[16] Especially under totalitarian tendencies, decision making authority was confined to a narrow technocratic core—or a single leader figure—that designed the entire social and economic system from top to bottom.

increasingly fragile under their own complexity. In other words, although the concentration of power—that is, governance—at the center may appear to produce a false sense of stability, it simultaneously and systematically weakens adaptive capacity. Especially in knowledge intensive systems, the centralization of decisions leads to the loss of local context, delays, and faulty optimizations. For this reason, **modern organizational theory**[17] has shifted its focus away from approaches that fully centralize power or distribute it without limits, and toward hybrid models in which decision rights are located as close as possible to the context, yet constrained by shared principles.[18] [19]

Modernism and Technology Management

Post Enlightenment rationalization also shifted social legitimacy away from religion based authority toward law, market mechanisms, and specialized bureaucracy. In other words, governance ideology moved from an abstract level to concrete and practical instruments. This shift was also reflected in resource allocation and investment priorities. Public and private capital flowed toward visible, measurable, and scalable infrastructure projects capable of sustaining social order. Thus, for modern states and capitalist actors, physical infrastructure that enabled accessibility, connectivity, and reach became a component of legitimacy. In fact, there were two fundamental rationales behind modernism's focus on transportation systems and infrastructure: economies of scale and market expansion. Railways, ports, roads, and later air transportation reduced the cost of moving goods and labor, enabled the formation of new markets, and made faster capital accumulation and reinvestment possible. Infrastructure investments also became instruments through which states and large corporations materialized their spheres of dominance and embedded mechanisms of control and regulation. In this sense, infrastructure evolved into both an economic and a political strategy.

Here as well, we see that this historical tendency establishes striking parallels with platform engineering in the digital age. The role once played by investments in physical infrastructure is today assumed by paradigms such as Internal Developer Platforms and what we call Golden Paths. Platform engineering consolidates organizations' needs for scalability, security, and integration into an infrastructure layer defined by centralized principles, thereby enabling application teams to innovate rapidly on top of this shared layer. The same logic that governed classical infrastructure investments applies here directly: centralized standards and investments provide the common ground required for distributed activities to operate efficiently.

The Industrialization of Software Production

Our claim is simple and clear: just as industrialization is impossible without building a railway network, and a modern country cannot exist without industrialization, a scalable technology ecosystem in the modern digital economy cannot be established without a solid software platform and shared infrastructure. Platforms enable the reuse and combination of capabilities. In the absence of such a common foundation, each team is forced to build its own solutions from scratch, leading to recurring costs, incompatibilities, and increasing security vulnerabilities.

Imagine that every factory had to build its own railway network. In systems without platform engineering, this is effectively the situation today. Each team is positioned like a factory that must transport its own raw materials. Everyone tries to solve their own infrastructure problems because there is no shared transport line, no common standard, no shared foundation. In such an environment, discussions shift away from production to entirely different concerns—logistics, for example (release, deployment, CI/CD). Factories are preoccupied not with what they produce, but with how they transport it. Efficiency declines, costs increase, and scaling becomes impossible. Every new factory is forced to relive the same infrastructure problems before it can even begin production. The same picture emerges in technology organizations without platform engineering. Teams struggle with CI/CD, security, observability, deployment, incident response, and operational details instead of developing products. Without a shared platform, knowledge is not reused, the same solutions are rebuilt repeatedly, and as the system grows, this complexity increases exponentially.

Platform engineering industrializes software production. Teams are able to focus on what they are actually meant to do: creating value for the customer. Scaling no longer depends on individual or team level effort; it emerges as a natural outcome of the system itself. At this point, it is also fair to raise a legitimate counterargument: throughout this text we have emphasized the risks and fragilities created by centralization, so does platform engineering itself carry the danger of a new form of centralization? The decisive distinction here lies in what is being centralized. Platform engineering does not advocate building a structure that centralizes decisions, execution, or expertise. Instead, it aims to centralize standards, shared services, and core infrastructure in order to distribute decision making authority to the field in a safer and faster way. In other words, what becomes centralized is not control, but the enablement infrastructure. In this approach, the center does not dictate how things must be done; it shapes outcomes by providing capabilities. It supplies the boundaries, tools, and shared language that make it possible for teams to make the right decisions within their own contexts. Therefore, unlike classical centralization, platform engineering positions itself as a mechanism that does not weaken local autonomy, but rather makes it scalable and sustainable. However, if governance, transparency, and access rights are not addressed in parallel, digital infrastructure can indeed turn into a new form of centralization. In such a case, the technology ecosystem risks becoming trapped in a dependency network similar to the hierarchical dependencies once created by physical infrastructure.

The Anatomy of Modern Power: The Platform State

Historical examples—whether empires or modern corporations—clearly demonstrate that sustainable power is made possible not through centralized control, but through systems in which decision rights are distributed to the right places, supported by shared infrastructures, and nourished by fast feedback loops. The trajectory stretching from the Ottoman Empire to Britain, from the United States to today's technology organizations, shows us that modernity lies in adaptive capacity, enablement, and learning speed. In the digital age, platform engineering represents the technical counterpart of this historical logic and systematization. When designed correctly, it does not produce centralization; on the contrary, it makes autonomy scalable. When designed incorrectly, it digitally reproduces the mistakes of the past. Therefore, the fundamental question for modern organizations is no longer "who makes the decision," but rather "which decision can be made, in which context, at what speed, and through which shared systems." The anatomy of modern power is shaped precisely around this question.

[17] Herbert A. Simon, Administrative Behavior (1947, rev. ed. 1957): The central problem of administration is the rationalization of decision making under conditions of limited knowledge and computational capacity.
[18] Baldwin, C. Y. & Clark, K. B. (2000), The Power of Modularity, MIT Press
[19] Matrix Organizational Model, Central–Local Balanced Model (Federal Structures), Platform Organizations, Hybrid Models Between Holacracy and Traditional Management, Agile–Hierarchy Hybrids, etc.