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**A Study on Establishing a Rapid Acquisition Process for
the Military Application of Advanced Commercial
Technologies in Korea**

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A Study on Establishing a Rapid Acquisition Process for the Military Application of Advanced Commercial Technologies in Korea

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Abstract

This study proposes a new rapid acquisition procedure for the swift military application of advanced commercial technologies in Korea, reflecting the growing global trend of accelerating the integration of cutting-edge commercial innovations into defense systems. To this end, the research examines and analyzes the institutional frameworks and practical cases of rapid military adoption in leading countries—including the United States, Israel, and Ukraine—to identify key success factors, best practices, and limitations. In particular, a nationwide survey of experts from Korean industry, academia, research institutes, and the military was conducted to assess the shortcomings of Korea's traditional weapon acquisition processes and derive a rapid acquisition model tailored to the Korean context. Based on these findings, the study presents actionable Korean style rapid acquisition process, policy and institutional recommendations that can enhance Korea's ability to accelerate the defense adoption of advanced civilian technologies to a level comparable with leading global defense nations.

Introduction

The contemporary security environment is characterized by unprecedented technological acceleration. Advances in artificial intelligence, unmanned systems, satellite communications, and big data analytics are reshaping the nature of warfare at a fundamental level. Unlike previous generations of military innovation, these technologies are largely developed in the commercial sector and subsequently adapted for military use.

Recent conflicts have demonstrated this transformation with striking clarity. In particular, the Russia–Ukraine War has shown that commercially available drones, civilian satellite networks, and open-source intelligence platforms can significantly influence battlefield outcomes. More recently, conflicts involving Iran and its regional engagements have further highlighted the increasing use of drones, missile systems, and networked surveillance capabilities, reinforcing the role of rapidly adaptable and often commercially derived technologies in modern warfare. These developments underscore the growing importance of speed in technology adoption and operational deployment.

Against this backdrop, traditional defense acquisition systems are increasingly inadequate. These systems were originally designed to support large-scale, capital-intensive weapon systems developed over long time horizons. However, such approaches are ill-suited for technologies that evolve rapidly and require continuous iteration.

South Korea faces a particularly acute challenge in this regard. While the country possesses advanced technological capabilities and a strong industrial base, its defense acquisition system remains largely rooted in conventional procurement models. Although recent



policy initiatives have sought to introduce elements of rapid acquisition, their impact has been limited due to deeper structural constraints.

This study addresses the following research questions. First, how can South Korea establish an effective rapid acquisition process capable of integrating advanced commercial technologies? Second, what institutional and procedural barriers hinder such integration? Third, what lessons can be drawn from leading countries, and how can these be adapted to the Korean context.

Research Framework and Methodology

This study adopts a comprehensive research framework that integrates theoretical analysis, comparative case studies, and empirical investigation. The research is structured around three main components: analysis of global rapid acquisition models, evaluation of Korea's existing acquisition system, and development of a policy-oriented reform model.

First, the study conducts an in-depth review of global defense innovation trends, focusing on how advanced countries have restructured their acquisition systems to accommodate commercial technologies with velocity. Particular attention is given to the United States, Israel, and Ukraine, which represent distinct but complementary models of rapid acquisition.

Second, the study examines the structural limitations of Korea's acquisition system through institutional analysis. This includes an evaluation of procedural frameworks, governance structures, and incentive mechanisms.

Third, the study incorporates findings from a nationwide expert survey involving stakeholders from industry, academia, research institutes, and the military. This empirical component provides critical insights into the practical challenges and constraints faced by key actors within the defense ecosystem.

Finally, based on these analyses, the study proposes a Korean-style rapid acquisition model designed to address identified limitations while leveraging global best practices.

Global Trends in Rapid Defense Acquisition

The increasing importance of commercial technologies in military applications is a defining feature of contemporary defense innovation. Unlike traditional defense technologies, which were primarily developed within government-controlled systems, many of today's most advanced technologies originate in the private sector.

The United States has been at the forefront of this transformation, particularly through the establishment of the Defense Innovation Unit (DIU) in the middle of 2010s. The DIU was created to bridge the gap between the Department of Defense and commercial technology companies, particularly those in Silicon Valley. Through mechanisms such as the Commercial Solutions Opening (CSO), the United States has developed a flexible acquisition process that enables rapid contracting and prototyping.

The CSO process typically involves identifying operational problems, soliciting solutions from commercial firms, rapidly awarding contracts, and conducting prototype development within a short timeframe. Unlike traditional procurement processes, which can take over a decade, CSO projects are often completed within one to two years. Empirical data indicate that a significant proportion of these projects successfully transition to operational deployment, demonstrating the effectiveness of this approach.



Israel offers another compelling model through its iHLS ecosystem, which emphasizes civil-military integration and startup-driven innovation. The iHLS framework supports the entire life cycle of innovation, from problem identification and startup selection to structured accelerator programs, prototyping, testing, and commercialization. In particular, the accelerator programs provide startups with mentoring, technical validation, access to military users, and connections to investors, thereby facilitating rapid capability development and market readiness. This model is characterized by its strong emphasis on real-world testing and rapid iteration, enabling technologies to be deployed quickly and effectively.

The Ukrainian experience, particularly during wartime, further highlights the importance of agility in acquisition systems. Faced with urgent operational needs, Ukraine has rapidly integrated commercial drone technologies and other innovations into its military operations. A central driver of this effort has been the establishment of the Brave1 platform, which serves as a core innovation and coordination hub connecting the government, military, and private-sector technology developers. Through this platform, Ukraine has been able to accelerate proposal evaluation, funding allocation, field testing, and deployment in an integrated manner. This demonstrates that under the right institutional conditions, rapid acquisition is not only possible but essential for operational effectiveness.

Table 1. Comparative Overview of Rapid Acquisition Systems in Major Countries

Category	USA(DIU)	Israel (iHLS)	Ukraine (Brave1)
Launch Year	2015	2012	2023
Governing Body	U.S. Department of Defense (DoD)	Private sector + Ministry of Defense (SIBAT)	Ministry of Digital Transformation
Key Technology Areas	Commercial technologies (AI, robotics, cybersecurity, etc.)	Dual-use technologies (security, cyber, sensors)	Drones, cyber, and battlefield IT solutions
Operational Structure	Government-led with private-sector engagement	Private accelerator-driven ecosystem	Wartime-oriented digital innovation platform
Contracting Mechanism	Flexible contracting using OTA (Other Transaction Authority)	PoC-based model linking demonstration to commercialization	Fast-track approval with priority on battlefield deployment
Core Characteristics	Institutionalized rapid transition of commercial technologies into military capabilities	Private-sector-led defense innovation through accelerator programs	Civil-military integrated rapid innovation model under wartime conditions

A comprehensive review of major countries' efforts to rapidly integrate advanced commercial technologies into military applications reveals a set of critical policy implications across multiple dimensions, including policy orientation, legal and institutional frameworks, organizational structures, budgeting mechanisms, acquisition processes, and supporting infrastructure.

From a policy perspective, leading countries exhibit distinct but converging strategic orientations toward rapid acquisition. The United States, through the DIU and its CSO mechanism, emphasizes the rapid military application of advanced commercial technologies by



prioritizing speed, flexibility, and direct engagement with non-traditional defense firms. In addition, the United States has institutionalized rapid acquisition through the use of Other Transaction Authority (OTA) and the establishment of the Adaptive Acquisition Framework (AAF), which includes pathways such as the Middle Tier of Acquisition (MTA)—enabling rapid prototyping and fielding typically within five years—and tailored Software Acquisition approaches for iterative and agile capability development. These mechanisms collectively demonstrate a successful model for integrating advanced commercial technologies into defense acquisition systems. In contrast, Israel's iHLS and related innovation platforms focus on expanding an open defense innovation ecosystem driven by private-sector creativity and startup participation. Ukraine's Brave1 initiative represents a wartime model, where the primary objective is the immediate deployment of operationally viable technologies, thereby accelerating innovation under battlefield conditions.

In terms of legal and institutional frameworks, flexibility emerges as a common denominator. The United States leverages OTA to bypass traditional Federal Acquisition Regulation (FAR) constraints, enabling agile contracting and rapid technology adoption. Israel operates under a relatively unconstrained legal environment, allowing private-sector-led innovation without significant regulatory barriers. Ukraine utilizes emergency procurement laws and digital platforms to expedite decision-making and resource allocation in wartime.

Organizationally, these countries have established dedicated entities to facilitate rapid acquisition. The United States has institutionalized innovation through the DIU and rapid acquisition offices within the military services, fostering collaboration among the military, industry, academia, and research institutions. Israel's model is characterized by private-sector leadership, with iHLS serving as a central hub connecting startups, investors, and defense stakeholders. Ukraine operates its Brave1 platform under the Ministry of Digital Transformation, highlighting the role of digital governance in defense innovation.

Budgetary arrangements further reinforce these institutional differences. The United States allocates substantial resources through its Research, Development, Test, and Evaluation (RDT&E) budget, with DIU funding complemented by additional defense appropriations for scaling successful projects. Israel combines government funding with private investment, providing targeted financial support to startups through defense R&D programs. Ukraine adopts a hybrid approach, mobilizing both public and private funding to support rapid innovation under resource-constrained conditions.

The acquisition processes themselves highlight the most significant divergence from traditional systems. The U.S. CSO model follows a streamlined sequence of needs identification, problem definition, solicitation, evaluation, contracting, prototyping, and transition to production, typically completed within one to two years. Israel's iHLS model operates on a life cycle approach encompassing needs identification, open calls, startup selection, acceleration, testing, investment linkage, and commercialization, often within six to twelve months. Ukraine's Brave1 platform enables an even faster cycle—from proposal submission to battlefield deployment—within two to six months.

Finally, infrastructure plays a critical enabling role in these systems. The United States maintains multiple DIU hubs across major innovation regions, supported by extensive human networks and venture capital linkages. Israel benefits from a concentrated technology hub in Tel Aviv, coupled with robust testing and validation facilities. Ukraine utilizes digital platforms and operational testbeds to accelerate deployment.

In summary, while each country adopts a distinct approach, several common principles emerge: flexibility in legal frameworks, strong institutional support, integration of private-sector innovation, rapid prototyping and testing, and alignment with national strategic objectives. These



findings provide important implications for designing a Korean-style rapid acquisition system capable of bridging the gap between commercial innovation and military capability.

Table 2. Comparative Overview of Rapid Acquisition Systems in Major Countries

Category	United States (DIU)	Israel (iHLS)	Ukraine (Brave1)
Policy / Strategy	Rapid military application strategy leveraging commercial technologies	Expansion of an open defense innovation ecosystem driven by private-sector creativity	Rapid deployment of operationally viable technologies for battlefield use
Legal / Institutional Framework	Use of OTA to streamline acquisition and bypass FAR regulations	Minimal legal constraints; privately driven, agreement-based operations	Wartime emergency regulations with platform-based execution
Organization	DIU structure including MET, CET, and Portfolio PM; rapid acquisition units across military services (Army, Navy, Air Force, Marine Corps, Space Force)	Private-sector-led iHLS ecosystem with collaboration from Ministry of Defense and military	Platform-based organization under the Ministry of Digital Transformation
Budget	Funded by DoD (approx. \$1 billion annually) with additional private-sector investment	Primarily private investment with supplementary government funding	Combined funding from government and allied support; multiple projects in the range of tens to hundreds of millions USD
Acquisition Process	Needs identification → problem definition → solicitation → pitching → contracting → prototyping → transition to production	Needs definition → open call → startup selection → accelerator program & MVP development → validation → investment → commercialization/export	Proposal submission → evaluation → funding → pilot operation → battlefield deployment
Acquisition Timeline	Within 12–24 months	Typically within 6 months	Typically within 2–6 months (accelerated under wartime conditions)
Infrastructure	Five major DIU hubs (e.g., Silicon Valley), supported by NSIN (network) and NSIC	Technology hub centered in Tel Aviv with shared testing and validation facilities	Brave1 digital platform and Ministry of Defense testbeds
Summary	Benchmark model with well-established budget, organization, and procedures	Private-sector-driven gateway for rapid technology integration supported by military collaboration	Highly flexible, combat-oriented model enabling rapid deployment of AI, drones, and robotics

Current Status and Structural Limitations of Korea’s Defense Acquisition System

In response to the growing need for the rapid integration of advanced technologies into military capabilities, South Korea has introduced several policy instruments aimed at



complementing its traditional, long-cycle defense acquisition system. Among these, the Rapid Pilot Project and the Rapid Requirements system represent the core institutional mechanisms designed to accelerate the adoption of emerging technologies. In parallel, the government has also implemented a range of defense industry support programs to facilitate the entry of private firms into the defense sector and to foster technological innovation.

The Rapid Pilot Project is primarily designed as a pre-acquisition experimentation mechanism that enables the development and testing of prototypes within a relatively short timeframe. Typically, the program operates within a five-year period, including approximately two years for prototype development and an additional two to three years for subsequent urgent requirement designation and potential transition to acquisition. However, compared to leading rapid acquisition mechanisms such as the CSO, the system does not incorporate a formal requirement determination at the initial stage. Instead, requirement decisions are made only after successful demonstration, which introduces uncertainty in the transition to full-scale acquisition.

The Rapid Requirements system, in contrast, is structured to support expedited acquisition based on formally identified urgent operational needs. Unlike the Rapid Pilot Project, it includes an explicit requirement determination process and follows a more structured testing and evaluation framework. This allows for relatively clearer pathways toward initial production and deployment. However, despite this formalization, the system remains constrained by elements of the traditional acquisition framework, particularly in later stages of mass production and long-term force integration. Moreover, since its introduction in 2023, there have been no confirmed cases of actual program implementation, raising concerns regarding its practical effectiveness and operational viability.¹

Both systems share certain common characteristics, including a maximum project duration of approximately five years and the possibility of producing minimum operational quantities. However, significant differences exist in terms of requirement determination, evaluation processes, and pathways to full-scale production. In particular, the transition from prototype development to operational deployment remains ambiguous in both systems, especially with regard to follow-on production beyond initial batches. In many cases, subsequent large-scale acquisition still relies on conventional procurement processes, thereby limiting the effectiveness of rapid acquisition mechanisms.

¹ In response to these limitations, the Defense Acquisition Program Administration (DAPA) has recently initiated efforts, as part of a national policy agenda, to revise the proposed Advanced Defense Capability Acquisition Act (tentative title). These efforts aim to establish a new acquisition pathway for the rapid fielding of advanced commercial technologies within the next three years, reflecting a growing institutional recognition of the need for more agile and flexible acquisition mechanisms.



Table 3. Comparison of Korea's Rapid Acquisition Systems
(Adapted from Jang et al., 2024)

Category	Rapid Pilot Project	Rapid Requirements	Remarks
Requirement Determination	X*	O	*Urgent requirement can be determined after successful pilot project completion
Testing & Evaluation	□ Military pilot operation + performance verification testing)	O (Formal military testing and evaluation)	Since 2024, performance verification testing may substitute formal T&E for systems developed through pilot projects (Defense Acquisition Program Act, Sept. 2023)
Minimum Operational Unit Production	O	O	Minimum operational quantity can be produced through sole-source contracts with prototype developers (Defense Acquisition Act, Sept. 2023)
Initial Deployment / Follow-on Production (Phase 1)	Unclear	O	Possible if initial production quantities are reflected during urgent requirement determination
Full Deployment / Follow-on Production (Phase 2+)	Unclear	Unclear	Conventional acquisition process (PPBEES) may apply (requirement determination → mid-term planning → feasibility study → production)
Project Duration	Within 5 years (2 years for pilot + 2–3 years after urgent requirement decision)	Within 5 years	—
Budget	Approx. KRW 58 billion (2024); typically tens of billions KRW per project	No fixed budget limit (projects exceeding KRW 50 billion require feasibility study)	—

Despite these institutional efforts, Korea's rapid acquisition system continues to exhibit significant structural limitations when compared to leading international models. One of the most critical challenges is the lack of flexibility in contracting and evaluation procedures. Unlike systems such as the U.S. OTA, which enable highly adaptive contracting mechanisms, Korea's acquisition framework remains bound by rigid regulatory structures, limiting the ability to rapidly engage with commercial technology providers.

A second major limitation lies in the absence of a fully developed demonstration-based procurement system. While the Rapid Pilot Project includes elements of prototype testing, it does not provide a clear and consistent pathway for transitioning successful prototypes into operational deployment. This gap between experimentation and acquisition significantly reduces the overall effectiveness of the system.

Third, the linkage between acquisition programs and operational military users remains insufficient. Effective rapid acquisition systems require close and continuous interaction between developers and end-users, enabling iterative feedback and real-time adaptation. However, in Korea's current system, such integration is limited, resulting in a disconnect between technological development and operational requirements.

Fourth, barriers to entry for private-sector participants—particularly startups and non-traditional defense firms—remain high. Complex regulatory requirements, limited incentives, and uncertainties regarding intellectual property rights discourage participation from innovative commercial actors. As a result, the defense innovation ecosystem remains relatively closed compared to those of leading countries.

These structural limitations highlight the need for both incremental improvements and more fundamental institutional reform. In the short term, continued refinement of existing mechanisms—such as regulatory adjustments, expanded budgets, and improved operational guidelines—can help mitigate some of the current constraints. However, such measures alone are unlikely to achieve the level of performance observed in advanced countries.

Accordingly, there is a growing consensus on the need to establish a new acquisition pathway specifically designed for the rapid military application of advanced commercial technologies. One potential approach is the introduction of a Korean-style rapid acquisition mechanism, tentatively referred to as a “K-DIU CSO,” modeled on the U.S. DIU framework. Such a system would incorporate flexible contracting, problem-driven acquisition, and rapid prototyping cycles.

In addition, it is necessary to develop dedicated programs that facilitate the transition of research and development outcomes into fieldable prototypes. This could take the form of a Rapid Force Integration Program that bridges the gap between technology development and operational deployment. Furthermore, existing defense industry support programs should be more closely integrated with rapid acquisition processes to ensure that their outputs contribute directly to military capabilities.

In conclusion, while South Korea has made important strides in introducing rapid acquisition mechanisms, the current system remains constrained by structural and institutional limitations. Addressing these challenges will require not only policy adjustments but also the establishment of a fundamentally new acquisition framework capable of supporting rapid, flexible, and innovation-driven defense development.

Empirical Findings: Key Results from the Survey on Rapid Acquisition

The survey targeted a diverse group of respondents, including experts from academia, industry, research institutes, and the military. In addition, companies selected under the “Defense Innovation 100” program were included to capture perspectives from emerging defense-related firms. A total of 58 valid responses were collected, comprising 16 expert participants and 42 representatives from industry from July 31 to August 29, 2025.

Perceived Limitations of the Traditional Acquisition System

The survey results reveal a strong consensus that South Korea's traditional defense acquisition system—commonly referred to as the PPBEES (Planning, Programming, Budgeting,



Execution, Evaluation, and Sustainment) framework—is not adequately equipped to respond to the rapid evolution of advanced commercial technologies.

Approximately 70.2% of respondents evaluated the system’s responsiveness as insufficient or very insufficient, while only 5.3% considered it effective. When converted to a five-point Likert scale, the average score was 2.26, indicating a below-average level of performance. These findings suggest that the current acquisition system is structurally misaligned with the pace of technological change, particularly in areas driven by commercial innovation.

Strong Demand for Acquisition System Reform

In contrast to the negative evaluation of the existing system, there is overwhelming agreement on the necessity of reform. A total of 94.4% of respondents indicated that improvements to acquisition procedures are necessary, with 59.3% stating that such reforms are “very necessary.” The average score of 4.50 further underscores the urgency of institutional change. This perception is particularly strong among experts, whose average score reached 4.81, compared to 4.37 among industry respondents. This gap suggests that those with deeper policy and institutional experience perceive a greater need for systemic transformation.

Key Reasons for Reform: Structural Misalignment with Technological Change

The survey identifies several key reasons why reform is considered necessary. The most frequently cited reason, accounting for 41.6% of responses, is that the traditional acquisition process is fundamentally incapable of supporting the rapid military application of advanced commercial technologies. Additional factors include the inability of the current system to keep pace with fast technological advancements (26.6%), structural barriers to participation by startups and small firms (14.5%), and the lack of institutional pathways for integrating commercial innovations into military systems.

Comparative Assessment with Advanced Countries

When benchmarked against leading countries, Korea’s rapid acquisition systems—specifically the Rapid Pilot Project and Rapid Requirements—are perceived as significantly underdeveloped. For the Rapid Pilot Project, 87.5% of respondents rated Korea’s system as inferior to those of advanced countries, while only 12.3% considered it comparable. The results are even more pronounced for the Rapid Requirements system, with 91.1% indicating that it falls short of global standards. These findings clearly indicate that Korea’s current approach is not competitive in the global context and requires substantial improvement.

Structural Weaknesses in Existing Rapid Acquisition Programs

The survey further identifies specific areas requiring improvement within Korea’s rapid acquisition programs. For the Rapid Pilot Project, the most critical issue is the lack of guaranteed transition to mass production following successful prototype development (20.5%). This is followed by insufficient incorporation of military requirements in early stages (14.6%), reliance on traditional defense contractors (12.3%), and the absence of effective transition mechanisms to full-scale acquisition (11.1%).

Similarly, for the Rapid Requirements system, the absence of dedicated budgets is identified as the most significant limitation (20.9%), followed by weak linkage to follow-on production (17.4%), limited profitability due to constrained production volumes (15.1%), and continued dominance of established defense firms (13.4%). These results highlight a common structural issue: the lack of a seamless pathway from innovation to deployment.

Major Barriers to Rapid Military Adoption

The survey also identifies key barriers to the rapid military application of advanced commercial technologies. The most significant concern is insufficient budget allocation, which



received the highest score (4.20), followed closely by the lack of guaranteed military procurement after successful project completion (4.12). Other major barriers include inadequate legal frameworks (e.g., absence of OTA-like mechanisms), limited collaboration between developers and military users, insufficient reflection of operational needs, and restrictive security regulations. These findings suggest that financial uncertainty and institutional constraints are the primary obstacles to effective rapid acquisition.

Policy Priorities for Reform

Finally, the survey identifies key priorities for improving acquisition procedures. The most important priority is the establishment of dedicated budgets for rapid acquisition programs, with an average score of 4.40. This is followed by guaranteed procurement of successful prototypes by specific military units (4.22), the introduction of demonstration-based evaluation systems (4.14), and mechanisms for rapid performance upgrades after initial deployment (4.06). Additional priorities include strengthening collaboration between developers and military users, aligning technological development with operational needs, establishing dedicated legal frameworks, and improving organizational capacity.

Summary of Findings

Overall, the survey results reveal a consistent pattern. First, the existing acquisition system is widely perceived as inadequate. Second, there is strong consensus on the need for reform. Third, the key challenges are structural rather than technological. Finally, effective reform requires a comprehensive approach that addresses legal, institutional, financial, and operational dimensions. These findings provide a strong empirical foundation for the development of a Korean-style rapid acquisition model and underscore the urgency of institutional transformation.

Establishing a Korean-Style Rapid Acquisition Model

To address the structural limitations identified in Korea's current defense acquisition system, this study proposes the establishment of a dedicated rapid acquisition pathway designed specifically for the military application of advanced commercial technologies. This proposed framework represents a fundamental departure from existing mechanisms such as the Rapid Pilot Project and Rapid Requirements system.

The Korean-style Rapid Acquisition model is designed to overcome the inherent limitations of traditional acquisition processes by introducing a flexible, problem-driven, and innovation-oriented approach. Drawing on best practices from leading international models—including the U.S. DIU, Israel's iHLS ecosystem, and Ukraine's Brave1 initiative—the proposed framework is tailored to Korea's institutional and industrial context.

At its core, the Korean style Rapid Acquisition model consists of a four-stage acquisition process that integrates rapid problem identification, flexible contracting, iterative prototyping, and scalable deployment.

Stage 1: Military Needs Identification and Open Solicitation (Within 30 Days)

The first stage focuses on identifying operational needs and translating them into actionable problem statements. Unlike traditional requirement-driven approaches, this stage emphasizes a problem-based framework in which military units articulate operational challenges rather than predefined technical specifications.

Once needs are identified, they undergo a process of validation and refinement through close coordination between operational units and acquisition authorities. This includes redefining problem statements, conducting market research, evaluating technological feasibility, and assessing potential risks.



Based on this analysis, a solicitation for solutions is issued to the private sector. This solicitation is designed to attract a broad range of participants, including startups, small and medium-sized enterprises, and non-traditional defense contractors. The entire process is structured to be completed within 30 days, ensuring rapid engagement with the commercial technology ecosystem.

Stage 2: Company Selection and Contracting (Within 90 Days)

The second stage involves the evaluation of proposed solutions and the selection of participating companies. This process is designed to be significantly more streamlined and flexible than conventional procurement procedures.

Initially, companies submit concise solution proposals within a short timeframe, typically within 10 days. These proposals are evaluated based on criteria such as technological maturity, market readiness, security considerations, and implementation feasibility.

Shortlisted candidates are then invited to present their solutions through structured presentations or pitch sessions. The evaluation process involves a multidisciplinary team, including program managers, technical experts, military end-users, and external specialists.

Following this process, selected companies are invited to submit refined proposals, after which final selection decisions are made. Contracts or cooperative agreements are then concluded within 90 days, significantly reducing the time required for initial engagement.

Stage 3: Prototype Development and Operational Experimentation (Within Two Years)

The third stage focuses on the development of prototypes and their validation under realistic operational conditions. This stage is critical for bridging the gap between conceptual innovation and practical military application.

Selected companies are provided with comprehensive support, including access to advisory panels or accelerator programs. These support mechanisms may include technical mentoring, proof-of-concept (PoC) development assistance, investor linkage, and regulatory guidance.

A key feature of this stage is the integration of military users into the development process. Prototype developers are matched with designated test units, and dedicated testbeds are established to facilitate continuous feedback and iterative improvement. In the case of AI-based systems, data sharing, model training, and operational feedback are actively supported to enhance performance.

In addition, mechanisms such as “Live Demo Days” are introduced to enable direct interaction between developers, military personnel, public agencies, and potential investors. These events serve as platforms for demonstrating capabilities, gathering feedback, and facilitating future scaling.

Operational experimentation is conducted through field testing in military environments, allowing for the evaluation of usability, effectiveness, and deployment readiness. Based on these results, decisions are made regarding the suitability of the technology for operational use.

Stage 4: Initial Deployment, Rapid Iteration, and Scaling (Within Two to Five Years)

The final stage focuses on transitioning successful prototypes into operational deployment and expanding their application.

Initial deployment is conducted at the unit level, typically within the military unit that first identified the operational need. A minimum quantity of the system is procured to enable real-world usage and validation.



Following deployment, continuous feedback from operational users is used to drive rapid iteration and performance improvement. Existing funding mechanisms, such as those supporting the enhancement of current force capabilities, can be leveraged to support these activities.

Scaling is achieved through multiple pathways. First, formal requirement generation can be initiated to support full-scale production under existing acquisition frameworks. Second, the application of the technology can be expanded to other public agencies, such as police, coast guard, and emergency services, thereby increasing demand and utilization.

Third, partnerships with major defense contractors can be established to facilitate integration into larger systems and enhance production capacity. Fourth, private investment can be mobilized through venture capital and defense-focused funding mechanisms to support commercialization and growth.

Finally, export opportunities are actively pursued through participation in international defense exhibitions, government-to-government (G2G) cooperation programs, and engagement with key partner countries. Participation in multinational exercises and joint demonstrations further enhances the visibility and credibility of developed technologies.

Table 4. Korean-Style Rapid Acquisition Process (Draft)

Phase	Sub-Stage	Key Activities	Responsible Entity	Timeline	Number of participating companies
Phase 1 Needs Identification & Problem Definition	1-1 Needs Identification	Identification and submission of urgent operational needs from military units	Military units, K-DIU	Within 30 days	5-100+
	1-2 Problem Definition	Refinement of military needs into problem statements aligned with advanced technologies	K-DIU PM, military, technical team		
	1-3 Market Research & Feasibility	Market analysis, TRL assessment, feasibility and risk analysis	K-DIU PM, technical team, external experts		
	1-4 Solicitation	Development and announcement of solution solicitation (Request for Proposal)	K-DIU PM		
Phase 2 Company Selection & Contracting	2-1 Proposal Submission	Submission of short proposals (≤ pages or ≤ slides)	Participating firms	Within 60-90 days	5-20
	2-2 Evaluation & Pitch	Technical evaluation and presentation (multi-stage review)	K-DIU PM, technical team, military users, experts		
	2-3 Final Selection & Contract	Final selection and contract/agreement signing	K-DIU PM, contracting authority		
Phase 3 Prototype Development & Experimentation	3-1 Prototype Development	PoC support, test unit matching, Live Demo Day, investor linkage	Selected firms, military test units, advisors, investors	Within 1-2 years	1-5
	3-2 Field Experimentation	Operational testing and validation in military environments	Military users, K-DIU		
Phase 4 Deployment, Iteration & Scaling	4-1 Initial Deployment	Initial procurement and deployment at requesting military unit	Military units	Within 2-5 years	1-2
	4-2 Rapid Iteration	Performance improvement based on user feedback and operational use	Military, K-DIU, developers		
	4-3 Scaling & Expansion	Transition to full-scale production (PPBEES), expansion to public sector, private partnerships, investment, and export	DAPA, military, K-DIU, industry, investors		



Conclusion and Policy Implications

This study has examined the structural limitations of South Korea's defense acquisition system in the context of rapidly evolving advanced commercial technologies and proposed a comprehensive framework for institutional reform. Drawing upon comparative analysis of leading countries and empirical findings from a nationwide survey, the study identifies a clear and urgent need for a paradigm shift in acquisition policy and practice.

The analysis demonstrates that the primary challenge facing Korea is not a lack of technological capability, but rather the inadequacy of its institutional framework. Existing mechanisms, including the Rapid Pilot Project and Rapid Requirements system, represent important initial efforts but remain constrained by structural limitations in flexibility, scalability, and integration. As a result, they are insufficient to meet the demands of rapid technological change and evolving operational requirements.

In response to these challenges, this study proposes the establishment of a Korean style rapid acquisition model. This framework represents a fundamental departure from traditional acquisition models, emphasizing a problem-driven, flexible, and innovation-oriented approach. The proposed four-stage process—comprising rapid needs identification, streamlined contracting, iterative prototyping, and scalable deployment—provides a structured yet adaptable pathway for integrating advanced commercial technologies into military capabilities.

However, the successful implementation of this framework requires more than procedural reform. It necessitates a comprehensive transformation across multiple dimensions, including policy, legal frameworks, organizational structures, budgeting mechanisms, and supporting infrastructure.

At the policy and strategic level, rapid acquisition must be elevated to a central pillar of Korea's advanced defense innovation strategy. This includes the articulation of a clear national vision, the prioritization of key technological domains, and the development of a long-term roadmap supported by pilot programs and phased expansion. The establishment of a dedicated organization, tentatively referred to as K-DIU, should serve as the institutional anchor for this transformation.

From a procedural perspective, the introduction of the Korean style Rapid Acquisition Model is essential. By adopting a four-stage acquisition process with clearly defined timelines, Korea can significantly reduce acquisition cycles while maintaining operational effectiveness. This approach also enables greater participation from non-traditional actors, thereby expanding the defense innovation ecosystem.

Legal and institutional reform is equally critical. New legislative measures should be introduced to support rapid acquisition, including the establishment of flexible contracting mechanisms, simplified approval processes, and demonstration-based evaluation systems. Existing laws, such as the Defense Acquisition Program Act and the Defense Industry Development Act, should be revised to accommodate these changes. In addition, consideration should be given to enacting a comprehensive legal framework for advanced defense strategic industries.

Organizational reform is required to ensure effective implementation. This includes the creation of dedicated rapid acquisition units within both central acquisition authorities and operational commands, as well as the expansion of existing organizations responsible for defense industry support. Specialized personnel and program management capabilities must be developed to support the new system.

From a financial perspective, the establishment of dedicated budget mechanisms is essential. A separate budget line for rapid acquisition should be introduced to ensure stable



funding, complemented by mechanisms to attract private investment, such as a defense-focused venture fund.

Infrastructure development is another key enabler. This includes the establishment of dedicated testbeds for operational experimentation, the development of digital platforms to facilitate rapid acquisition processes, and the creation of communication hubs to enhance collaboration among stakeholders.

Furthermore, it is essential to strengthen the linkage between defense industry support programs and acquisition systems. The introduction of a Rapid Force Integration Program can facilitate the transition of R&D outcomes into fieldable prototypes, while the integration of rapid acquisition procedures into existing support programs can enhance their practical impact.

In conclusion, the transition toward a rapid, flexible, and innovation-driven acquisition system is not merely an option but a strategic necessity for South Korea. As the pace of technological change continues to accelerate, the ability to rapidly integrate advanced commercial technologies into military capabilities will become a decisive factor in national security and defense competitiveness. The Korean-style Rapid Acquisition model provides a viable and actionable pathway for achieving this transformation, but its success will depend on sustained commitment to institutional reform and strategic execution.

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References

- Brave1. (2025). <https://brave1.gov.ua/en/>
- Defense Acquisition Program Administration. (2023a, May 9). *Accelerating weapon system acquisition: Reducing procurement timelines by half*. Press release.
- Defense Acquisition Program Administration. (2024). *Introduction of acquisition fast track and future directions*.
- Defense Acquisition Program Administration. (2023b). *Defense industry development master plan (2023–2027)*.
- Defense Industry Promotion Agency (Korea Institute for Defense Analyses affiliated body). (2024). *Overview of defense industry promotion programs and their application to acquisition projects*.
- Defense Innovation Unit. (2021, May 5). *How to pitch the DIU* [Video]. YouTube. <https://www.youtube.com/watch?v=0ivj2LGPMYk&t=26s>
- Defense Innovation Unit. (2024). *DIU FY2023 annual report*.
- Defense Innovation Unit. (2025). *Open solicitations*. <https://www.diu.mil/work-with-us/open-solicitations>



Defense Rapid Acquisition Center. (2024). *Trends and future challenges of rapid pilot projects*.

iHLS Accelerator. (2025). <https://accelerator.i-hls.com/>

Jang, W. J., et al. (2024). *Establishing a Korean-style defense acquisition framework in response to global trends*. Korea Institute for Industrial Economics and Trade (KIET).

Ministry of National Defense & Defense Acquisition Program Administration. (2024). *Defense science and technology innovation promotion act*.

Ministry of National Defense & Defense Acquisition Program Administration. (2025a). *Defense acquisition program act*.

Ministry of National Defense & Defense Acquisition Program Administration. (2025b). *Enforcement decree of the defense acquisition program act*.

Ministry of National Defense & Defense Acquisition Program Administration. (2025c). *Defense industry development and support act*.

PitchBook. (2025). <https://pitchbook.com/profiles/investor/265045-69>

Presidential Commission on State Affairs Planning. (2025). *Five-year national governance plan of the Lee Jae-myung administration*.

The Times of Israel. (2019, August 12). *Come test your tech with us, security establishment urges innovative startups*.





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