

American Journal of Economics and Business Management

Vol. 9 Issue 10 | **pp.** 1080-1089 | **ISSN:** 2576-5973
Available online @ https://www.globalresearchnetwork.us/index.php/ajebm

Article

Developing Innovative Management Mechanisms in Construction Enterprises: Evidence from Surkhandarya Region, Uzbekistan

Shukurov Sherzod Kholmumin ugli*[1]

1. Teacher in Economics department, Termez University of economics and service
*Correspondece: sherzod_shukurov@tues.uz

Abstract: Construction is one of the fastest-growing sectors of Uzbekistan's economy, yet in regions such as Surkhandarya most work is done by small firms with limited management capacity. This article examines how innovative management mechanisms can be developed in construction enterprises, using Surkhandarya region as the case. We combine an analysis of official statistics for January–August 2026, a review of the national digital and regulatory framework, and a structured readiness diagnostic. The region completed UZS 10.7 trillion of construction work, about 4.1% of the national total. Buildings and structures made up 70.1% of that volume (66.7% nationally), while specialized construction accounted for only 7.6% (11.9% nationally). Across the country, civil engineering grew by 31.6% and specialized work by 36.0%, against 6.2% for large construction organizations. We propose a five-component innovation management mechanism (strategic and organizational, digital and process, human capital, incentives and finance, and ecosystem partnerships), a phased roadmap and a set of performance indicators. The readiness scores are provisional and should be validated by a firm-level survey.

Keywords: Construction enterprises; innovation management; digitalization; Surkhandarya region; project management; Uzbekistan.

Citation: Kholmumin ugli S. S. Developing Innovative Management Mechanisms in Construction Enterprises: Evidence from Surkhandarya Region, Uzbekistan. American Journal of Economics and Business Management 2026, 9(10), 1080-1098.

Received: 10th Jul 2026
Revised: 11th Aug 2026
Accepted: 11th Sep 2026
Published: 26th Oct 2026

Copyright: © 2026 by the authors. Submitted for open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/)

1. Introduction

Construction is a sector where a single weak link can undo months of work. A late delivery of materials, an incomplete drawing, a subcontractor who does not show up: each of these shows up later as a cost overrun or a defect. Managing that chain of dependencies is, in practice, what construction management is about, and it is also where most of the room for improvement lies. Technology matters, but the habits of the firm that uses it matter at least as much.

In Uzbekistan the stakes are high because the sector is large and growing. Construction firms completed UZS 259.4 trillion of work in January–August 2026, 11.8% more than a year earlier [1]. Almost all of it, 97.7%, was carried out by non-state organizations. That means the quality of management in private firms, and not only public programs, determines how efficiently the country builds.

Surkhandarya region is a useful place to look at the problem. It completed UZS 10.7 trillion of construction work in the first eight months of 2026, a respectable volume that nonetheless represents only about 4% of the national total. In February 2026 a package of 44 projects worth USD 7.1 billion was launched or commissioned in the region, which

signals a sizeable pipeline of demand. Meeting that demand will require contractors to handle more complex, better-documented and more tightly scheduled projects than before. At the same time, regional construction has long been dominated by small and micro firms: in a 2023 release the Statistics Committee reported that small enterprises and micro-firms accounted for 66.4% of the region's construction work, while large organizations accounted for 8.9% [2].

Government has not left firms entirely on their own. A national information system, "Transparent Construction", now digitizes permitting, expert review, control and tendering, and recent decrees tighten rules on housing development and urban planning. These tools change the environment in which firms operate, but they do not by themselves change how a firm plans projects, trains people, shares risk with subcontractors or decides what to try next. That is the job of internal management mechanisms, and it is where we focus.

The study asks three questions. First, what does official statistics reveal about the structure and dynamics of construction in Surkhandarya relative to the country? Second, how ready is the regional construction sector, in management terms, to adopt innovations? Third, what set of mechanisms could help construction enterprises in the region move from ad hoc improvement to systematic innovation? We should say plainly that we did not run a firm-level survey. The article therefore combines statistical evidence with a structured, provisional assessment and a proposal that should be tested in practice.

Section 2 reviews the literature and describes the methodology. Section 3 presents the results, Section 4 discusses implications and limitations, and Section 5 concludes.[3]

2. Methodology

The study uses a descriptive-analytical design with three components. The first is an analysis of official construction statistics published by the National Statistics Committee for January–August 2026, together with earlier releases for context. We compare Surkhandarya with the national distribution by region and by type of activity, and we calculate shares and, where the components are published, derived values. Civil engineering volume for Surkhandarya, for example, is not reported separately in the sources we used, so we obtained it as the total minus buildings and structures minus specialized work. These derived numbers are rounded and should be read as approximations.

The second component is a review of the national regulatory and digital framework based on official announcements and press coverage of decrees. The third is a readiness diagnostic. We defined six dimensions drawn from the literature (strategy and governance, digital project management, procurement and contracting, skills and organization, industrial and subcontractor base, finance and project pipeline) and scored each on a five-point scale. A score of 1 means that there is neither a practice nor an enabling condition; 3 means that enabling conditions exist and are used by a part of the firms; 5 means that the practice is widespread. Because we have no firm-level data, the scores are the author's judgment based on the public evidence listed in Table 4, and we attach a confidence level to each.[4]

Two data caveats matter. First, the 2026 construction statistics are not directly comparable with 2025 releases. The January–August 2026 total of UZS 259.4 trillion, up 11.8%, implies a 2025 base of about UZS 232.0 trillion (Trend, 2026), whereas the January–August 2025 release reported UZS 188.5 trillion (NSC, 2025b). The difference suggests a methodological revision, possibly in coverage of informal activity, and so we do not compute regional growth rates across releases. Second, the 2023 structure data refer to non-state organizations only, and so comparisons with 2026 are indicative.

3. Results

3.1. Surkhandarya in the national picture

Table 1 and Figure 1. place the region in the national distribution. Surkhandarya completed UZS 10.7 trillion of construction work in January–August 2026, which is 4.1% of the national volume (UzDaily, 2026a; NSC, 2026a). Tashkent city alone accounted for UZS 88.7 trillion, more than eight times the figure for Surkhandarya. Among the regions for which volumes were reported in the sources we used, Surkhandarya stands ahead of Karakalpakstan, Jizzakh and Syrdarya but behind Andijan, Samarkand, Kashkadarya, Bukhara and Fergana. Three regions (Khorezm, Namangan and Navoi) were not reported in the sources we consulted and are not shown.[5]

Table 1. Construction in Surkhandarya compared with the national total, January–August 2026[6]

Type of work	Surkhandarya, UZS trn	Uzbekistan, UZS trn	Surkhandarya share, %
All construction work	10.7	259.4	4.1
Buildings and structures	7.5	173.1	4.3
Civil engineering (derived)	2.4	55.5	4.3
Specialized construction	0.8	30.8	2.6

Note: Surkhandarya's civil engineering figure is calculated as total minus buildings and structures minus specialized work (UZS 815.4 billion). Figures are rounded.

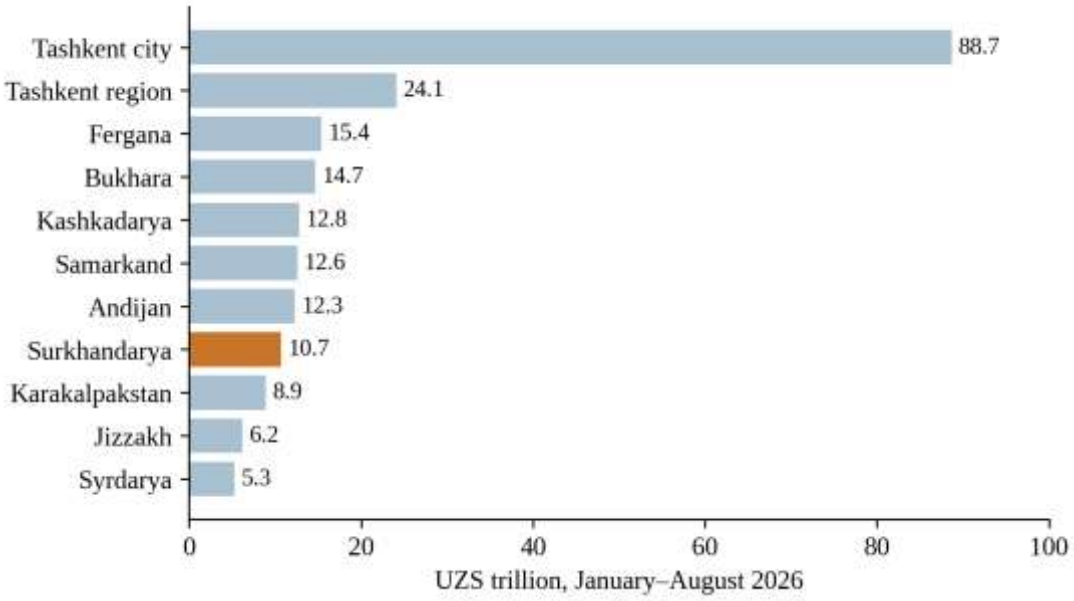


Figure 1. Construction work by region, January–August 2026 (UZS trillion)[7]

3.2. Structure and dynamics

The mix of work in the region differs from the national pattern in an interesting way (Figure 2). Buildings and structures make up 70.1% of Surkhandarya's volume against 66.7% nationally, and civil engineering is about the same (22.3% against 21.4%). Specialized construction, which covers activities such as installation of engineering systems, finishing and other trade work, is clearly smaller in the region, at 7.6% of volume against 11.9% nationally. Put differently, Surkhandarya produces roughly 4.3% of the nation's buildings but only 2.6% of its specialized construction work (Table 2).

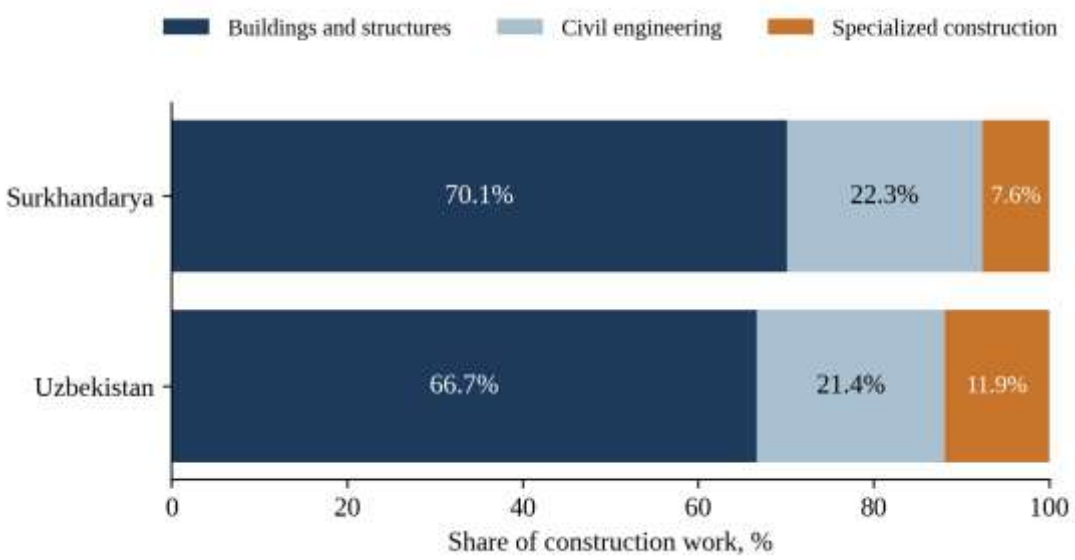


Figure 2. Structure of construction work by type of activity, January–August 2026 (%)[8]

Nationally, the more complex segments are the ones that are growing fastest (Table 2, Figure 4). Civil engineering grew by 31.6% and specialized construction by 36.0%, both far above the 11.8% growth of all construction. Large construction organizations, which produced UZS 50.5 trillion, or about 19.5% of the total, grew by only 6.2%. The 2025 releases showed the large organizations' share at 22.2% (NSC, 2025a). So the activity that requires more specialization and engineering is expanding fastest, while the group of firms we might expect to be best equipped for it is growing more slowly than the market.

Table 2. Construction work in Uzbekistan by activity and enterprise type, January–August 2026[9]

Category	Volume, UZS trn	Share of total, %	Growth, y/y, %
All construction work	259.4	100.0	11.8
Buildings and structures	173.1	66.7	n/a
Civil engineering	55.5	21.4	31.6
Specialized construction	30.8	11.9	36.0
Large construction organizations	50.5	19.5	6.2

The regional structure has also shifted over time, at least in indicative terms (Figure 3 and Figure 4). In 2023, non-state organizations in Surkhandarya devoted 77.1% of their volume to buildings and structures, 17.3% to civil engineering and 5.6% to specialized work (NSC, 2024). By January–August 2026 the share of buildings had fallen to 70.1%, and civil engineering and specialized work had increased to 22.3% and 7.6%. Because of differences in coverage described in Section 2.4, we treat the direction rather than the exact magnitude as informative. The direction is clear, though: the regional construction sector is moving towards work that is more technically demanding.

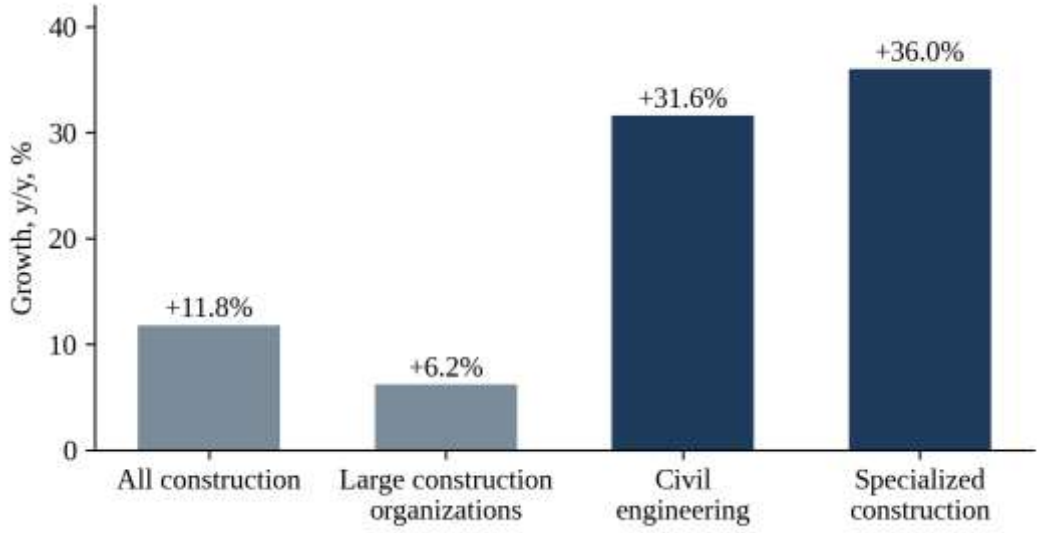


Figure 3. Growth of construction work by category, January–August 2026 (y/y, %)

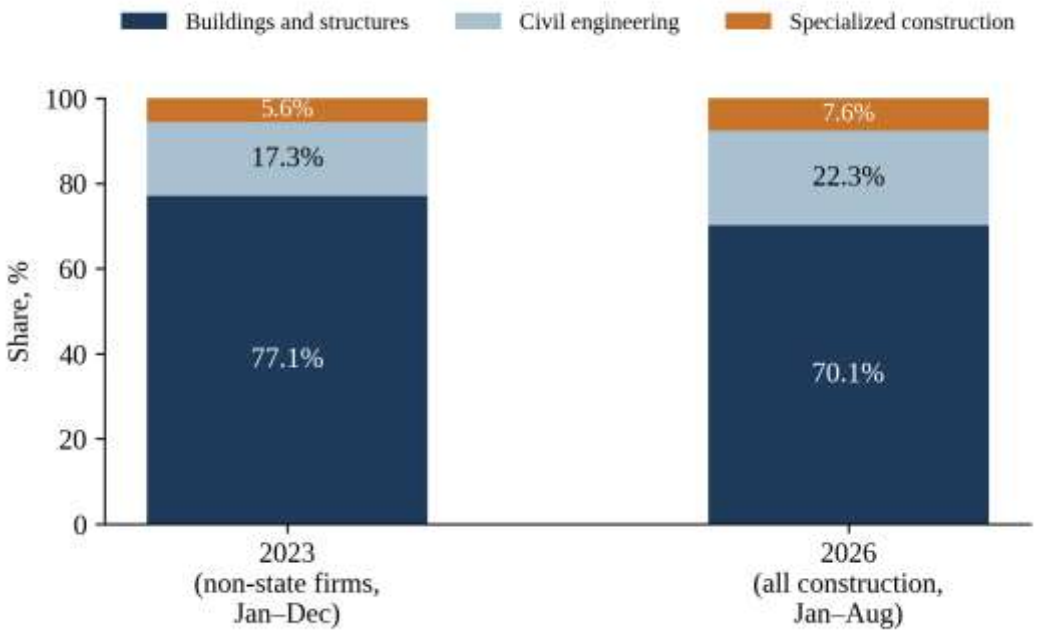


Figure 4. Structure of construction work in Surkhandarya, 2023 and 2026 (%)[10]

Another structural feature is the weight of small firms. In the 2025 releases, large construction organizations in Surkhandarya completed UZS 762.2 billion of work in January–July, equal to about 2.1% of the national figure for large organizations (UZS 36.2 trillion) (NSC, 2025a), whereas the region's share of all construction was around 5% in the same release series (NSC, 2025b). Within a single release series, then, the region's share of large-organization output is well below its share of total output. This is consistent with the 2023 picture of a sector built mainly on small and micro firms, and it matters for innovation because small firms rarely have dedicated management functions.

3.3. The enabling framework

Table 3 summarizes the national instruments that now shape the operating environment of a construction firm. Most of them work from the outside in: they require firms to register, publish, bid or document in ways that make activity more transparent. This is valuable, since it forces a baseline level of digital practice, but it is not the same as an internal innovation system.

Table 3. National instruments relevant to innovation in construction firms

Instrument	Year	What it requires or enables	Implication for firms
"Transparent Construction" national information system	2020 onward	Digital services, expert review of design documents, control and tendering	Firms must be able to work with electronic documents and platforms
Subcontractor selection through the system	2024	Subcontractors on projects above UZS 10 bn selected through the platform	Rewards documented capability; raises entry bar for informal subcontractors
Electronic platform for housing construction	2025	Builders raising shareholder funds publish project data	Increases need for project data discipline and reporting
Master plan registry	2026	No construction on unregistered master plans from 1 Nov 2026	Planning and compliance become earlier project gates
Regional investment pipeline	2026	44 projects worth USD 7.1 bn launched in Surkhandarya	Higher demand for capacity, coordination and quality

3.4. Readiness diagnostic

The diagnostic in Table 4 and Figure 6 gives a mixed picture. The two dimensions scored 3 are procurement and contracting, where platform-based tendering and subcontractor selection are already in place, and finance and project pipeline, where large investment programs signal demand and access to financing. The other four dimensions scored 2. Strategy and governance and skills and organization have low scores mainly because the sector is dominated by small firms with limited management layers. Digital project management scores low because national platforms regulate the relationship with authorities but we found no evidence that regional contractors use digital tools to manage their own projects. The industrial and subcontractor base is rated low on account of the thin specialized segment noted above.

Table 4. Provisional readiness of Surkhandarya's construction sector for innovation (author's judgment)[11]

Dimension	Main evidence	Score (1–5)	Confidence
Strategy and governance	Small and micro firms dominate; large organizations' share is low	2	Low
Digital project management	National platforms exist; no evidence of firm-level adoption	2	Low
Procurement and contracting	Platform-based tenders and subcontractor selection above UZS 10 bn	3	Medium
Skills and organization	Limited management layers in small firms; no regional training data	2	Low
Industrial and subcontractor base	Specialized work 7.6% of volume vs 11.9% nationally	2	Medium
Finance and project pipeline	44 projects, USD 7.1 bn launched in 2026	3	Medium

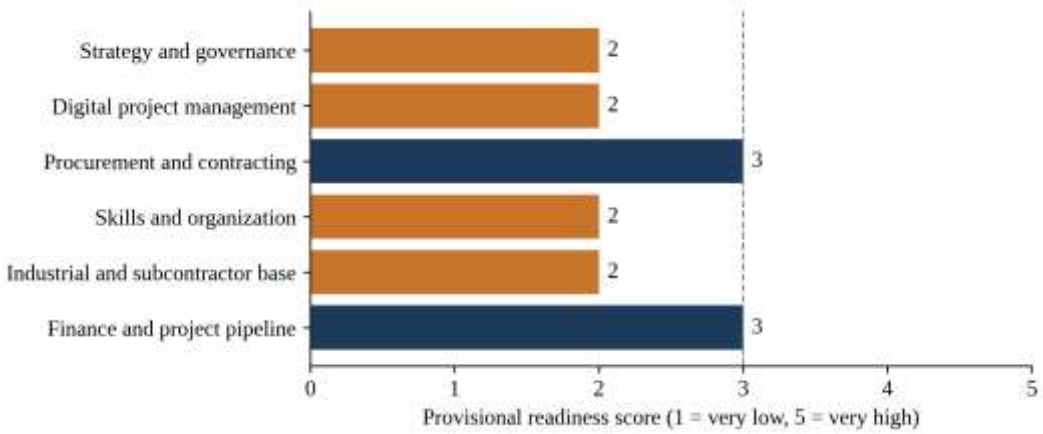


Figure 5. Provisional readiness scores by dimension[12]

3.5. Proposed innovation management mechanism

The diagnostic suggests that the binding constraints are inside the firm: how projects are planned and documented, who is responsible for improvement, how people are trained, and how risk and reward are shared with subcontractors. We therefore propose a mechanism with five components arranged around the enterprise and a feedback loop (Figure 6). The components reinforce one another. A digital tool without trained people tends to be abandoned, and training without incentives tends to fade.

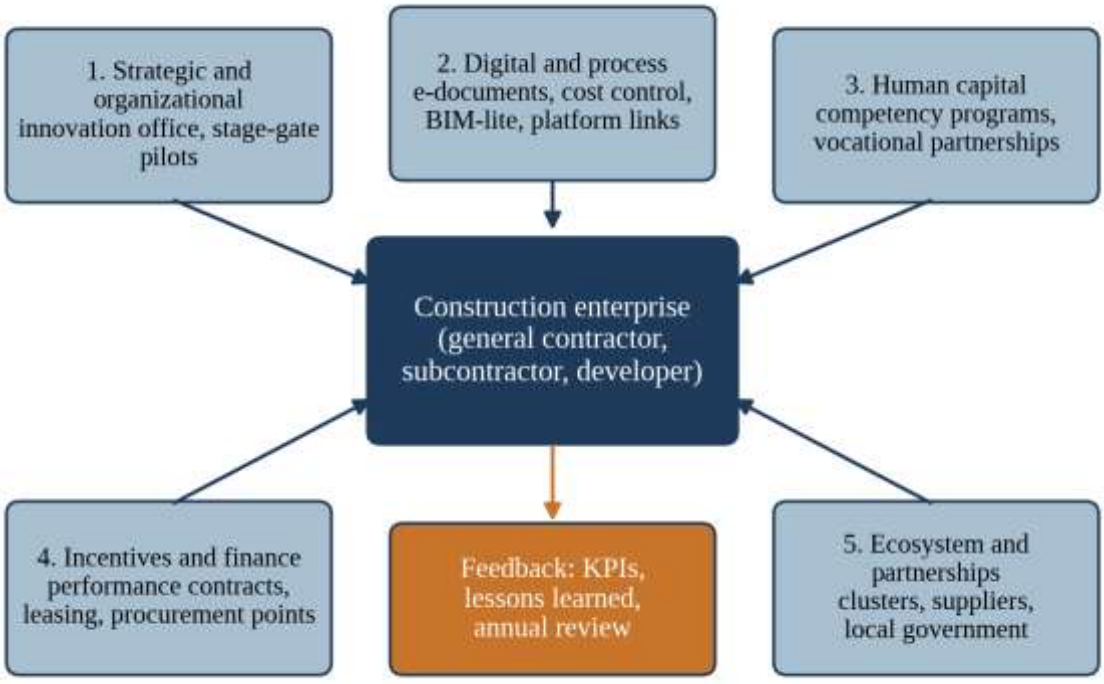


Figure 6. Proposed innovation management mechanism for a construction enterprise

Table 5 turns each component into instruments, a lead actor and indicators. The indicators are deliberately framed as things a firm can measure from its own records. We do not propose numerical targets here, because baselines for the region are unknown; the first task of Phase 1 is to measure them.

Table 5. Components of the mechanism, instruments and indicators[13]

Component	Main instruments	Lead actor	Indicators
1. Strategic and organizational	Named innovation officer; annual improvement plan; stage-gate selection of pilot projects; lessons-learned review after each project	Owner or director	Number of pilots completed; share of pilots scaled; review held (yes/no)
2. Digital and process	Electronic document control; cost and schedule tracking; BIM-lite for design coordination; integration with national platforms	Project manager	Schedule variance; rework cost as % of contract value; share of projects with digital records
3. Human capital	Role-based competency map; training cohorts with regional vocational colleges and universities; site-supervisor certification	HR lead or director	Training hours per employee; share of supervisors certified; staff turnover
4. Incentives and finance	Performance-based pay for site teams; equipment leasing; innovation points in own subcontractor selection; shared savings with subcontractors	Finance lead	Share of contracts with performance clauses; leasing share of new equipment
5. Ecosystem and partnerships	Supplier and subcontractor network; joint pilots with local authorities; peer learning among regional contractors	Director with industry association	Number of repeat subcontractors; joint pilots; on-time delivery of materials

Implementation is best staged (Figure 7). In the first year firms should measure where they stand and run two or three pilot projects with limited, practical tools, since it is cheaper to learn from a small pilot than from a firm-wide rollout. Over the next two years the tools that proved their worth can be scaled to larger projects, accompanied by training and by new contract terms. In the final phase, which could last until the fifth year, the firm embeds innovation into its routines, reviews indicators annually and works with partners to build a stronger local supply chain.

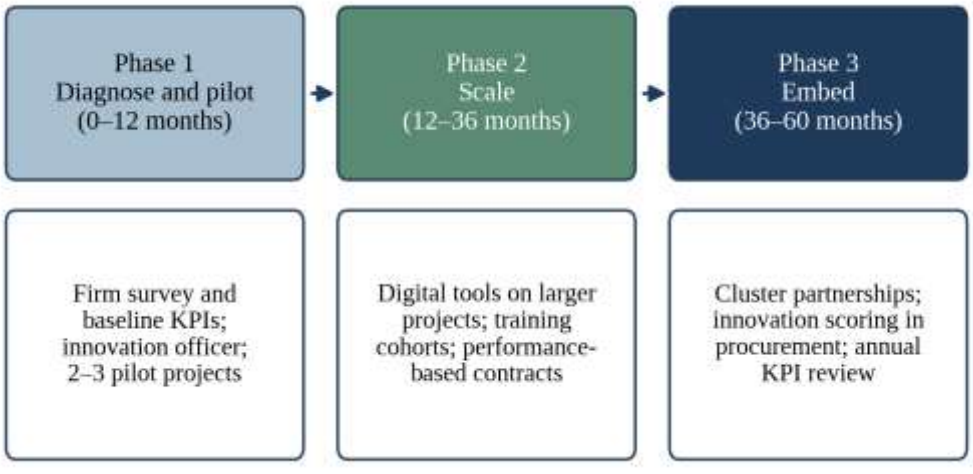


Figure 7. Phased roadmap for introducing the mechanism[14]

4. Discussion

Three findings stand out. First, Surkhandarya's construction sector is mid-sized in volume but thin in specialized capacity. The share of specialized work, 7.6%, is below the national share, and the region's share of large-organization output is small. A thin subcontractor base is a familiar obstacle to innovation in construction. Dubois and Gadde showed that the loose coupling of firms limits learning across projects, and in a region where specialized trades are few, general contractors have fewer partners with whom to try new methods and have to carry more of the burden themselves.

Second, the national direction of travel favors more complex work. Civil engineering and specialized construction are growing roughly two and a half to three times faster than construction overall, while large organizations lag. If Surkhandarya follows the national pattern, and its shift from 2023 to 2026 suggests that it is doing so, contractors will increasingly be asked to deliver projects that need coordination among several specialized trades. That is precisely the kind of work in which poor documentation and weak planning are costly, and where the management tools in Table 5 should pay off. We should be careful not to overstate this. The evidence in Figure 5 compares data of different coverage, and the national figures are for the whole country.

Third, the policy environment is ahead of the firm. The national information system, platform-based tendering and stricter planning rules create external pressure to digitize. Firms that merely comply can do so with minimal internal change, for instance by hiring an external consultant to upload documents. The risk is that digital compliance replaces digital management. Teece's distinction between sensing, seizing and transforming is helpful here: platforms help firms sense what is required, but seizing and transforming are internal tasks. Our proposed mechanism is an attempt to give those tasks an owner, a method and a set of indicators.

There are several practical implications. For firms, the most realistic starting point is modest: designate someone responsible for improvement, record schedule variance and rework cost on every project, and pilot one digital tool on one project. For associations and local authorities, the most valuable contribution may be to organize shared training, which small firms cannot afford alone, and to encourage networks of specialized subcontractors. For policy makers, tying support, such as leasing programs or procurement scoring, to documented management practices could help move the sector beyond compliance. Eastman et al. caution that technology gains depend on changes in work processes and contracts, and the same applies here: tools must be accompanied by new ways of contracting and sharing risk.

The study has clear limitations. We relied on secondary data and did not survey firms, so our readiness scores are provisional and may be wrong in either direction. Some regional figures, such as civil engineering volume, are derived, and the statistical series appear to have been revised between 2025 and 2026 releases, which restricts time comparisons. The mechanism itself has not been tested. Future work should therefore start with a representative survey of construction firms in Surkhandarya, using Oslo Manual-based questions on organizational and process innovation followed by case studies of pilot firms and, once enough data accumulate, a comparison across regions.[15]

5. Conclusion

This article examined how innovative management mechanisms can be developed in construction enterprises, using Surkhandarya region as a case. Official statistics show a region with a meaningful but modest share of national construction (about 4.1% in January–August 2026), a building-heavy structure, and a thin specialized segment. At the national level, complex segments are growing much faster than the sector as a whole, and large organizations are growing more slowly than the market. National digital platforms

and new rules are raising the baseline for transparency, yet they leave the internal management of firms largely untouched.

We proposed a mechanism with five components, a three-phase roadmap and a set of firm-level indicators. Its main message is practical: innovation in construction firms is less a matter of acquiring a particular technology than of building routines for planning, learning, training, contracting and partnership. Starting small, measuring results and scaling what works is more likely to succeed than ambitious one-off programs.

The conclusions are tentative, since they rest on public statistics and a provisional assessment. The next step is to measure the baseline through a survey of regional contractors, test the mechanism in a few pilot firms and revise it in light of experience.

REFERENCES

[1] F. Barbosa, J. Woetzel, J. Mischke, M. J. Ribeirinho, M. Sridhar, M. Parsons, N. Bertram, and S. Brown, *Reinventing Construction: A Route to Higher Productivity*. McKinsey Global Institute, 2017.

[2] A. M. Blayse and K. Manley, "Key influences on construction innovation," *Construction Innovation*, vol. 4, no. 3, pp. 143–154, 2004.

[3] A. Dubois and L.-E. Gadde, "The construction industry as a loosely coupled system: Implications for productivity and innovation," *Construction Management and Economics*, vol. 20, no. 7, pp. 621–631, 2002.

[4] C. Eastman, P. Teicholz, R. Sacks, and K. Liston, *BIM Handbook: A Guide to Building Information Modeling for Owners, Managers, Designers, Engineers and Contractors*, 2nd ed. Wiley, 2011.

[5] D. M. Gann and A. J. Salter, "Innovation in project-based, service-enhanced firms: The construction of complex products and systems," *Research Policy*, vol. 29, nos. 7–8, pp. 955–972, 2000.

[6] E. S. Slaughter, "Models of construction innovation," *Journal of Construction Engineering and Management*, vol. 124, no. 3, pp. 226–231, 1998.

[7] D. J. Teece, "Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance," *Strategic Management Journal*, vol. 28, no. 13, pp. 1319–1350, 2007.

[8] J. Tidd and J. Bessant, *Managing Innovation: Integrating Technological, Market and Organizational Change*, 6th ed. Wiley, 2018.

[9] G. Winch, "Zephyrs of creative destruction: Understanding the management of innovation in construction," *Building Research & Information*, vol. 26, no. 5, pp. 268–279, 1998.

[10] OECD/Eurostat, *Oslo Manual 2018: Guidelines for Collecting, Reporting and Using Data on Innovation*, 4th ed. OECD Publishing, 2018.

[11] National Statistics Committee of the Republic of Uzbekistan, "Construction works performed in the Republic of Uzbekistan, January–August 2026," Sep. 28, 2026. [Online]. Available: Official Statistics of Uzbekistan

[12] National Statistics Committee of the Republic of Uzbekistan, "Which regions are the leaders in the construction of buildings and structures?" Oct. 21, 2026. [Online]. Available: Official Statistics of Uzbekistan

[13] "Uzbekistan's construction sector grows 11.8% in 8M2026," *Trend*, Oct. 2, 2026. [Online]. Available: Trend News Agency

[14] "Construction with no corruption," *Gazeta.uz*, Jan. 29, 2024. [Online]. Available: Gazeta.uz

[15] "Construction activities to become open to the public," *Kun.uz*, Nov. 26, 2020. [Online]. Available: Kun.uz