A LOCALIZED DIGITAL RANKING DASHBOARD AS AN ALTERNATIVE TO COMMERCIAL ANALYTICS PLATFORMS: DESIGN EVIDENCE FROM NEW UZBEKISTAN UNIVERSITY

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Abstract. *Commercial ranking analytics platforms such as THE DataPoints and QS Insight Suite offer universities sophisticated benchmarking capabilities at subscription costs that place them beyond the reach of most institutions in developing higher education systems. This paper presents the design of a localized alternative: the Digital Ranking Dashboard (DRD), a centralized institutional platform developed as part of an integrated ranking-oriented governance framework for New Uzbekistan University. The DRD integrates six functional modules: scientific publications, citation tracking, international engagement, grants monitoring, a faculty-level KPI tracker, and a budget-indicator linkage module, each mapped to Times Higher Education ranking dimensions, and operates through five institutional governance bodies from the Strategic Governance Council to the Ranking Analytics Unit. Its distinctive feature is the budget-indicator linkage module, which connects financial allocations directly to indicator performance and enables cost-effectiveness evaluation of ranking strategy investments, a capability that commercial platforms, built for benchmarking rather than internal resource governance, do not provide. Benchmarking places the annualised cost of a localized build at 70-120 thousand USD against substantially higher commercial subscription structures, while retaining data sovereignty and integration with institutional financial systems. Elements of the platform concept have been adopted in the practice of the National Quality Assurance Agency for Education in the design of the methodological and functional model of the national rating platform (implementation certificate No. 03/18-144 of 16 December 2025), indicating scalability from institutional to system level.*

Keywords: *digital dashboard; ranking analytics; data sovereignty; university governance; developing countries; digital transformation*

1. Introduction

Data-driven management of ranking performance has become standard practice among internationally competitive universities [3], [4], and a commercial market has

formed to serve it: THE DataPoints and QS Insight Suite provide institutional benchmarking, indicator analytics and scenario tools as subscription services. For well-funded institutions these platforms lower the cost of evidence-based ranking strategy. For most universities in developing systems, their pricing performs the opposite function: it excludes precisely the institutions for which each allocation decision carries the highest opportunity cost.

The exclusion is not only financial. Commercial platforms are built for external benchmarking, comparing an institution against peers on published indicators, and not for internal governance, connecting an institution's own budget lines to its own indicator movements. The second capability is the one a resource-constrained university needs most, and it requires integration with institutional financial and personnel systems that no external subscription can provide.

This paper presents the design of a localized alternative developed for New Uzbekistan University as one of three components of an integrated ranking-oriented governance framework, alongside a three-level KPI system and a resource allocation model, continuing the author's research line on ranking methodologies [7]. The Digital Ranking Dashboard (DRD) is described as a design artefact: its module architecture, its governance integration, its economics, and the evidence of its scalability to the national level.

The argument is organised as follows. Section 2 presents the module architecture and its governance integration, with the budget-indicator linkage module as the analytical centrepiece. Section 3 develops the economics of localization, including the dependency that explains why the cost estimate is a range rather than a point. Section 4 presents the evidence of system-level adoption and draws the scaling logic, together with the limitation of the current evidence base. The perspective throughout is that of design research: the contribution is a validated, adopted design whose operational evaluation constitutes the next stage of the research line.

2. Module architecture

The DRD is a centralized platform of six functional modules, each mapped to specific THE ranking dimensions [1]. The scientific publications module tracks output against quality-weighted KPI definitions; the citation tracking module monitors citation dynamics with the multi-year lag structure of citation indicators built into its reporting horizon; the international engagement module covers co-authorship, mobility and partnership indicators; the grants monitoring module links external funding activity to the industry income dimension; the faculty-level KPI tracker cascades the three-level KPI system into unit dashboards; and the budget-indicator linkage module connects financial allocations to indicator performance.

The budget-indicator linkage module is the platform's distinctive contribution. It enables administrators to evaluate the cost-effectiveness of ranking strategy investments by relating expenditure categories to the indicator movements they are intended to produce, closing the loop between the resource allocation model and observed performance. This is the capability that transforms a monitoring dashboard into a governance instrument, and it is structurally unavailable to external benchmarking subscriptions because it requires the institution's own financial data.

The platform operates through five governance bodies with defined roles: the Strategic Governance Council for priority-setting and strategic allocation; the Research and Innovation Steering Committee; the International Partnerships Board; the Ranking Analytics Unit for continuous indicator analysis; and the faculty-level structures through which KPI accountability cascades. The dashboard is thus not an IT project attached to governance but the informational layer of a defined institutional architecture.

The governance integration deserves emphasis because it distinguishes the DRD from the generic category of business-intelligence dashboards, which universities frequently procure and rarely institutionalise. A dashboard without defined decision rights attached to its outputs produces awareness, not governance [8], [9]. In the architecture presented here, each module's outputs are the working material of a named body: publication and citation modules feed the Research and Innovation Steering Committee's quarterly cycle; the international engagement module feeds the International Partnerships Board; the faculty-level tracker feeds the result-based financing computation [2]; and the budget-indicator linkage module feeds the Strategic Governance Council's annual allocation decisions. The platform's value is thus not informational but constitutional: it defines what each governance body sees, on what cycle, and with what consequence [12].

Table 1. DRD functional modules and their mapping to THE ranking dimensions (condensed).

Module	**THE dimension**	**Key function**
Scientific publications	Research Quality	Quality-weighted output tracking against KPI definitions
Citation tracking	Research Quality / Citations	Citation dynamics with multi-year lag horizon
International engagement	International Outlook	Co-authorship, mobility and partnership indicators
Grants monitoring	Industry Income	External funding pipeline linked to income indicators

Faculty-level KPI tracker	All dimensions	Cascade of the three-level KPI system to unit dashboards
Budget-indicator linkage	All dimensions	Cost-effectiveness evaluation of ranking investments

3. Economics of localization

International benchmarking conducted for the framework [5], [6] places the annualised cost of building and operating a localized platform at 70-120 thousand USD, within a total annual ranking strategy investment estimated at 2.0-2.5 million USD for a young university pursuing international positioning [11]. Against commercial subscription structures, the localized build offers three economic properties: a cost level an order of magnitude below the headline figures of full commercial analytics suites; conversion of recurring subscription expenditure into partly capitalised institutional capability; and independence of the platform's marginal cost from the number of internal users, which matters for cascading dashboards to faculty level.

Two non-financial properties complete the case. Data sovereignty: institutional performance and financial data remain within institutional infrastructure, a consideration of increasing regulatory weight. And adaptability: a localized platform can incorporate national rating indicators alongside international ones, which commercial international platforms do not track, a property that proved decisive for the framework's system-level adoption.

The cost figures deserve one methodological remark. They are benchmarking-derived estimates, reported as ranges precisely because localization costs vary with the maturity of existing institutional information systems: a university with functioning research information and financial management systems builds the DRD as an integration layer, at the lower end of the range, while an institution starting from fragmented spreadsheets absorbs the cost of basic data infrastructure first. The range is therefore not imprecision but a statement of the platform's principal dependency, and it implies a sequencing rule for adopters: data infrastructure before dashboard, integration before analytics.

4. From institutional to national scale

The strongest evidence for the design is its adoption beyond the institution for which it was developed. As documented in implementation certificate No. 03/18-144 of 16 December 2025, the National Quality Assurance Agency for Education used the framework's materials, including the DRD concept as a single-platform instrument for monitoring, forecasting and decision support on rating indicators, in designing the

methodological and functional model of the national rating platform and in developing data collection and analysis mechanisms for the national rating of higher education institutions. The scaling logic is direct. The problems a national rating platform must solve, heterogeneous data sources, indicator-mapped modules, transparent cascading to evaluated units, and the linkage of results to consequential decisions, are the institutional platform's problems at larger scale. A design that solves them with localized, sovereign infrastructure at institutional level transfers to the national level with the same economic argument: the alternative to building is not buying, because the required integration with national data systems cannot be bought.

The limitation of the evidence should be stated plainly: the DRD is presented here as a validated design and an adopted concept, not as a platform with published operational performance data. Longitudinal evidence on usage, decision impact and maintenance economics is the natural next stage of this research line.

A further implication concerns the emerging market for national rating infrastructures. As more systems introduce national ratings with consequential funding linkages, the demand for platforms of exactly this type, indicator-mapped, unit-cascaded, decision-linked, will grow, and the choice between licensing international commercial tools and developing sovereign national platforms will recur at ministry level in many countries. The Uzbek case documented here, in which an institutionally developed design informed the national platform's methodological and functional model, illustrates one transfer path: institutional innovation absorbed upward into national infrastructure, rather than national procurement imposed downward onto institutions. For institutions, the platform additionally protects the reputational asset that ranking positions represent [10], by grounding external claims in auditable internal data. The national rating context sharpens the argument's timeliness for Uzbekistan specifically [14]. The regulation establishing the national rating of higher education institutions, with differentiated budgetary incentives from 2027 [13], creates for every ranked institution exactly the internal problem the DRD was designed to solve: continuous monitoring of a defined indicator set with financial consequences attached. Institutions that build the monitoring capability early convert a compliance burden into a management instrument; institutions that do not will experience the national rating as an annual external shock. The DRD design, developed against the international THE indicator set, extends to the national indicator set by module configuration rather than re-architecture, which is precisely the adaptability property that motivated localization in the first place.

5. Conclusion. For universities in developing systems, the choice in ranking analytics is not between a commercial platform and nothing; it is between renting external benchmarking and building internal governance capability. The DRD design

demonstrates that the second option is economically accessible (70-120 thousand USD annually), functionally superior for internal resource governance through the budget-indicator linkage module, and scalable, on documented evidence, from institutional to national level. The general implication for digital transformation in higher education is that data-driven governance is not a procurement category but a design capability, and that for resource-constrained systems, localization is not the second-best option but the one that produces sovereignty, integration and institutional learning as joint products.

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