Digi Ready+: Implementing a data-driven framework for measuring digital readiness across European universities

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Digital landscape

In an ever-evolving digital landscape, Higher Education Institutions (HEIs) must be "**equipped**" to meet the demands of our digital society.

It is very crucial for HEIs to acquire a better **mechanism to evaluate** their existing digital readiness levels, identify possible challenges, and establish plans for transitioning to digitally enhanced policies.

Digital Readiness in European Higher Education Institutions

a data-driven framework guided by Institutional and Instructional Analytics

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Funding: Programme: EU Erasmus+ Cooperation partnerships in higher education

The aim of DigiReady+ is to define a **framework** and develop a **prototype**, in the form of a web tool, to measure **Digital Readiness** in **Higher Education Institutions** based on **Institutional and Instructional Data Analytics** .

DEFINITION

"***Digital Readiness (DR)*** in Higher Education Institutions is defined as a <u>measure of the inclination and willingness to adopt digital technologies and facilitate digital opportunities to achieve goals</u> faster and with better results."

DR requires a **culture of innovation and collaboration** and can **improve the quality** of education and support the needs of students, faculty, and staff.

DigiReady+ Approach

- Digital Readiness Definition

- DigiReady+ Framework
  - DigiReady+ Dimensions (7 Dimensions)
    Through participatory workshops and literature survey
  - DigiReady+ Indicators (3-10 Indicators per Dimension)
    Analysis and Evaluation, 1-3 Questions per Indicator

- DigiReady+ Toolkit and API
  - DigiReady+ API and Data Sources
  - DigiReady+ Dashboard and Reports
  - DigiReady+ Score Pyramid - 4 Levels of DR + Intermediate sub-Levels
  - DigiReady+ Recommendations for Level Up

- DigiReady+ Guidelines
  Methodology, Data Sources, Glossary, Terms & Conditions

DR+ Dimensions
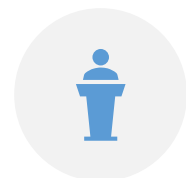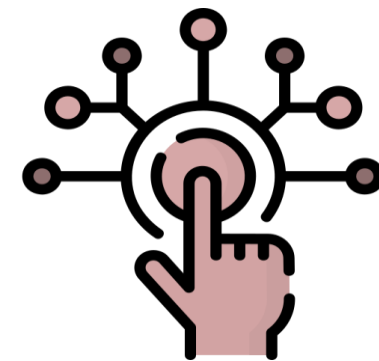
D1 Digital Leadership
Academic leaders guiding and supporting the digital transformation in education

D2 Policies and Strategies
Procedures needed to ensure the successful implementation of digital transformation in education

D3 Teaching and Learning
Use of digital technologies to enhance the teaching and learning experience

D4 Digital Content and Skills
Digital literacy assessments, materials used by learners, and modifications of curricula

D5 Digital Training and Support
on faculty and staff on the use of digital tools and resources

D6 Digital Infrastructure
The physical and technological resources needed to support digital learning

D7 Research, Networks, and Alliances are important aspects of digital readiness

- The DigiReady+ SMART Framework is focusing on **seven (7) Dimensions** for measuring the Digital Readiness of an HEI
- Defined through **participatory workshops** in 3 universities and **literature survey.**

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Higher Education Framework

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DR+ Indicators

The DR+ SMART Framework is based on **DR+ Indicators.**

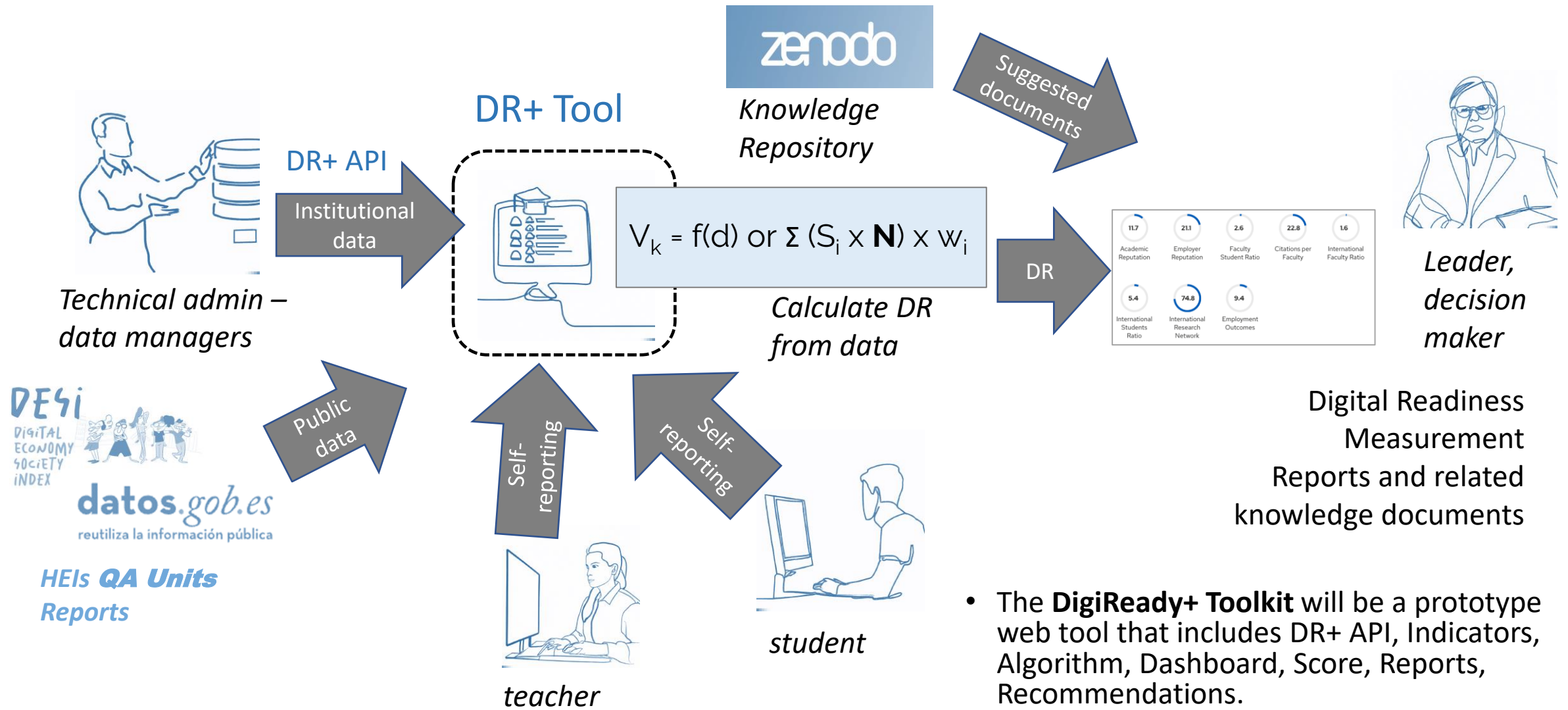The **DR+ Indicators are SMART** - Specific, Measurable, Achievable, Relevant and Time-bound

- **Specific**, means that the indicator needs to be narrow and accurately describe what needs to be measured.
- **Measurable** means that regardless of who uses the indicator it would be measured in the same way.
- **Achievable** means that collecting the data should be straightforward and cost-effective.
- **Relevant** requires that the indicator be closely linked to the relevant outcome.
- **Time-bound** means that there should be a timeframe linked to the indicator.

DR+ Data Sources

Higher Education Institutions have several common information systems that **can be used as data sources for the DigiReady+ Framework Indicators.**

- **IS1. Learning Management System (LMS)**
- **IS2. Student Information System (SIS)**
- **IS3. Institutional Directory Service (IDS)**
- **IS4. Digital Governance Centre Web Site (DGWS)**
- **IS5. Institutional Web Site (IWS)**
- **IS6. Curicula Registry Information System (CRIS)**
- **IS7. Quality Assurance Information System (QAIS)**
- **Other** (to be identified)

DR+ Toolkit and API

DR+ Tool

zenodo

Knowledge Repository

DR+ API

Institutional data

$$V_k = f(d) \text{ or } \Sigma (S_i \times \mathbf{N}) \times w_i$$

Calculate DR from data

Suggested documents

DR

Technical admin – data managers

HEIs QA Units Reports

Public data

Self-reporting

Self-reporting

teacher

student

Leader, decision maker

Digital Readiness Measurement Reports and related knowledge documents

- The **DigiReady+ Toolkit** will be a prototype web tool that includes DR+ API, Indicators, Algorithm, Dashboard, Score, Reports, Recommendations.

DR+ Pyramid

The DR+ Score Pyramid visualizes the different scores/areas of HEI's Digital Readiness.

- **DR-A (score 90-100)** is the top of the pyramid and includes HEIs that have fully implemented digital strategy which is constantly updated based on metrics, analytics, and business intelligence.

- **DR-B (B1 score 75-90, B2 score 60-75)** includes HEIs that have implemented digital strategy and they have adequate capacity of digital readiness, but there is room for improvements in specific areas.

- **DR-C (C1 scores 10-30, C2 scores 30-45, C3 scores 45-60)** includes HEIs that have digital services in all dimensions, but no clear digital strategy and they need to improve in terms of policies, interoperability, and process re-engineering.

- **DR-D (score 0-10)** includes HEIs that have no or limited digital services and no digital strategy
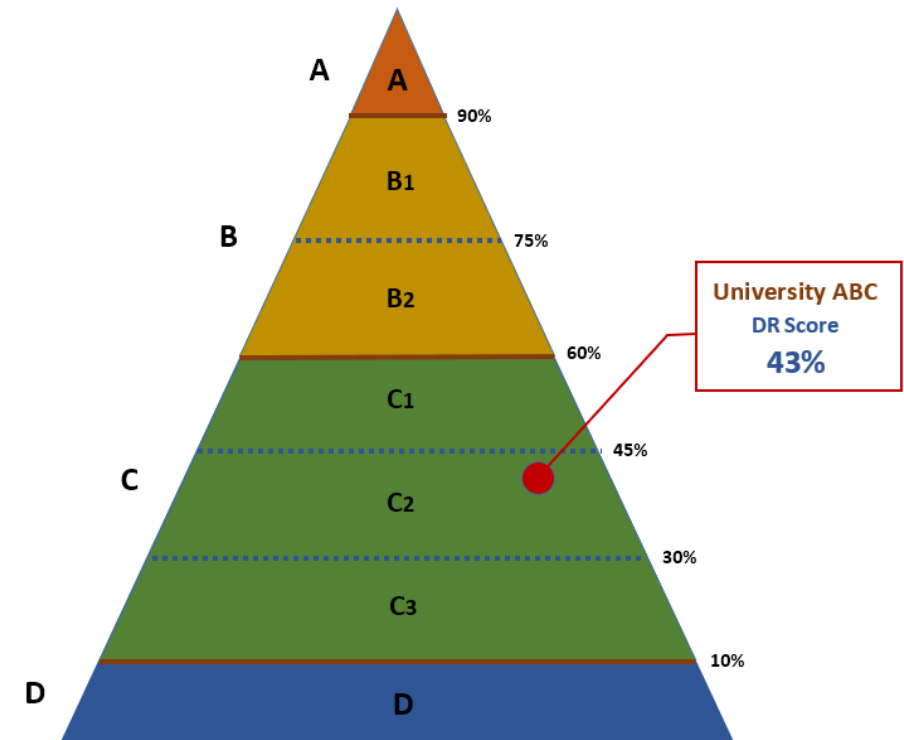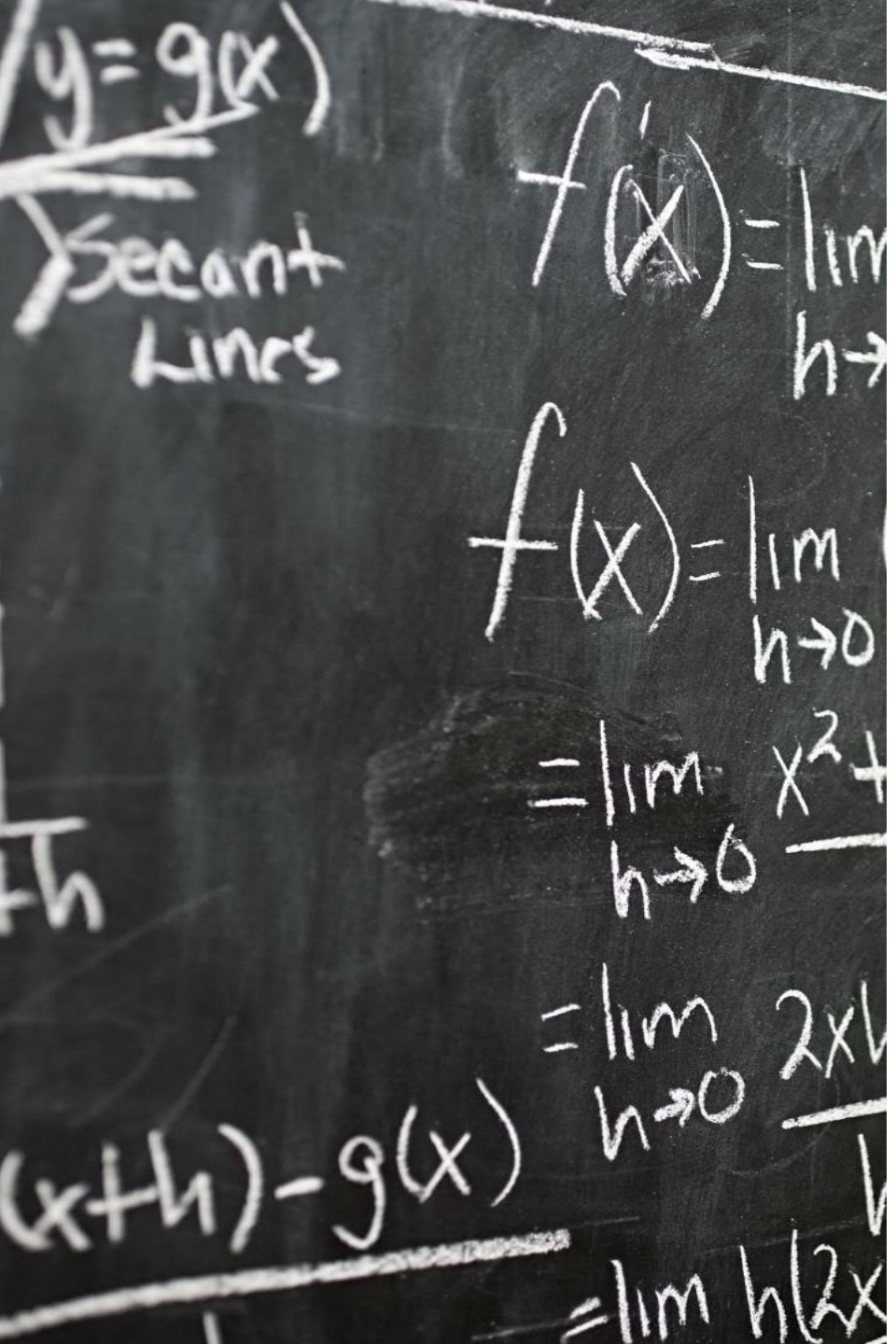
DR+ Recommendations

The DR+ Recommendations will **provide actionable insights** to HEIs both <u>horizontally</u> (general recommendations) and <u>vertically</u> (recommendations per dimension) and include <u>specific action plans</u> to help HEIs improve their digital readiness.

- **General recommendations** based on the HEI's profile and the overall digital readiness score to up-scale. (ex. Level C3 → C2, C1, B1)

- **Vertical recommendations** per DR+ dimension based on dimension's score and weak points.

- **Targeted recommendations** based on answers in specific DR+ Indicators in order to identify weak points and give suggestions for improvements.

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DigiReady+ Tool UI Design
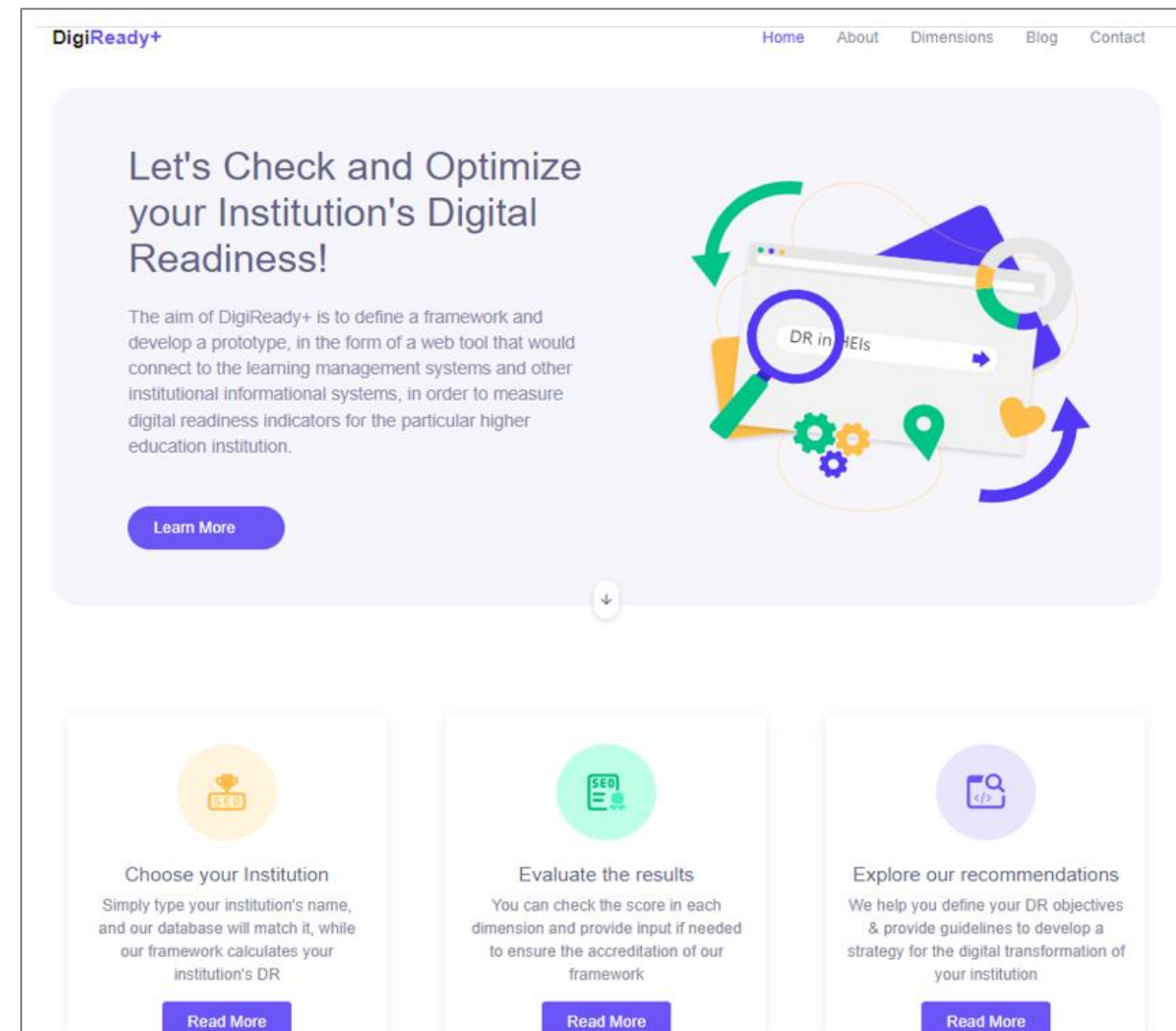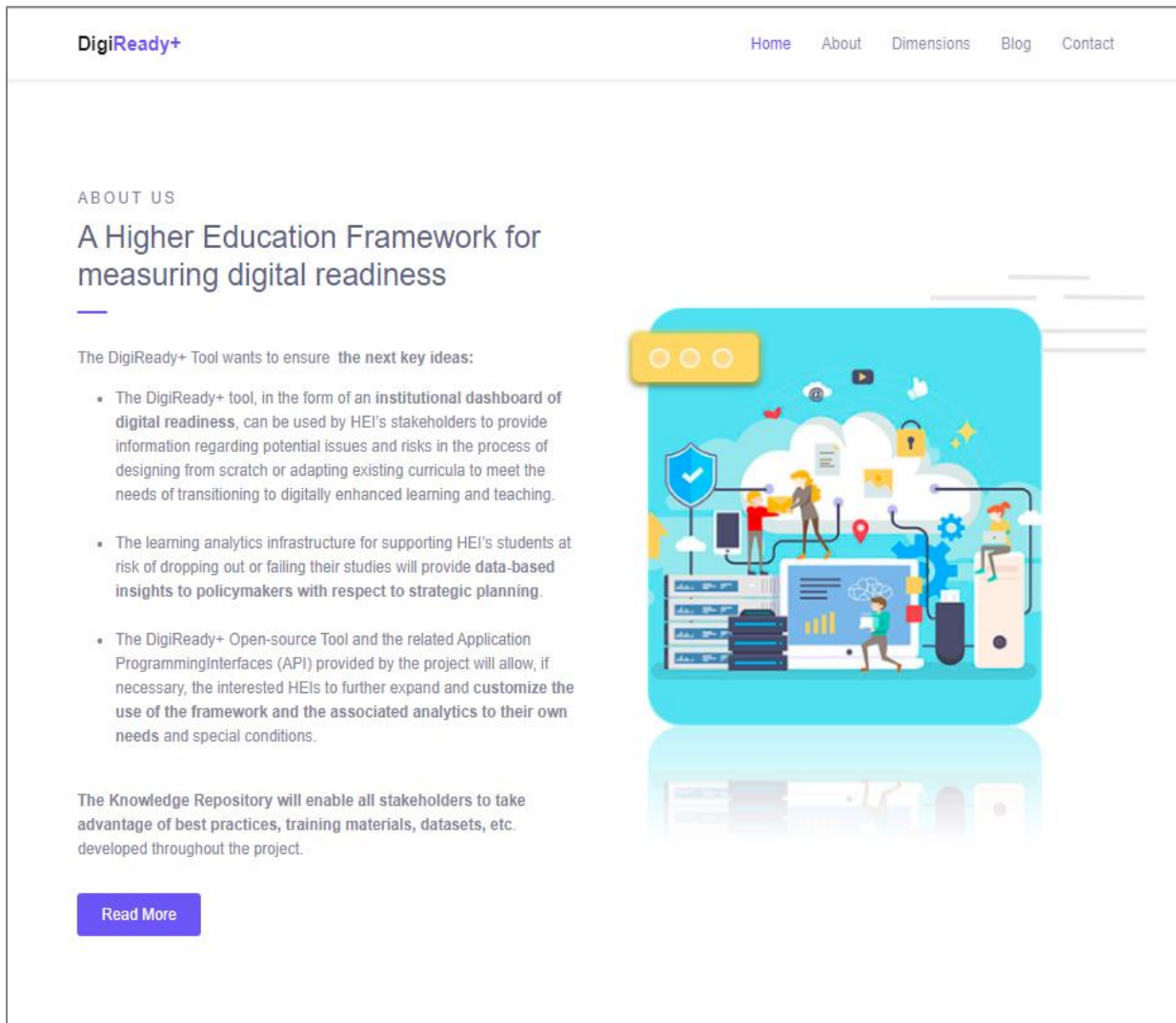
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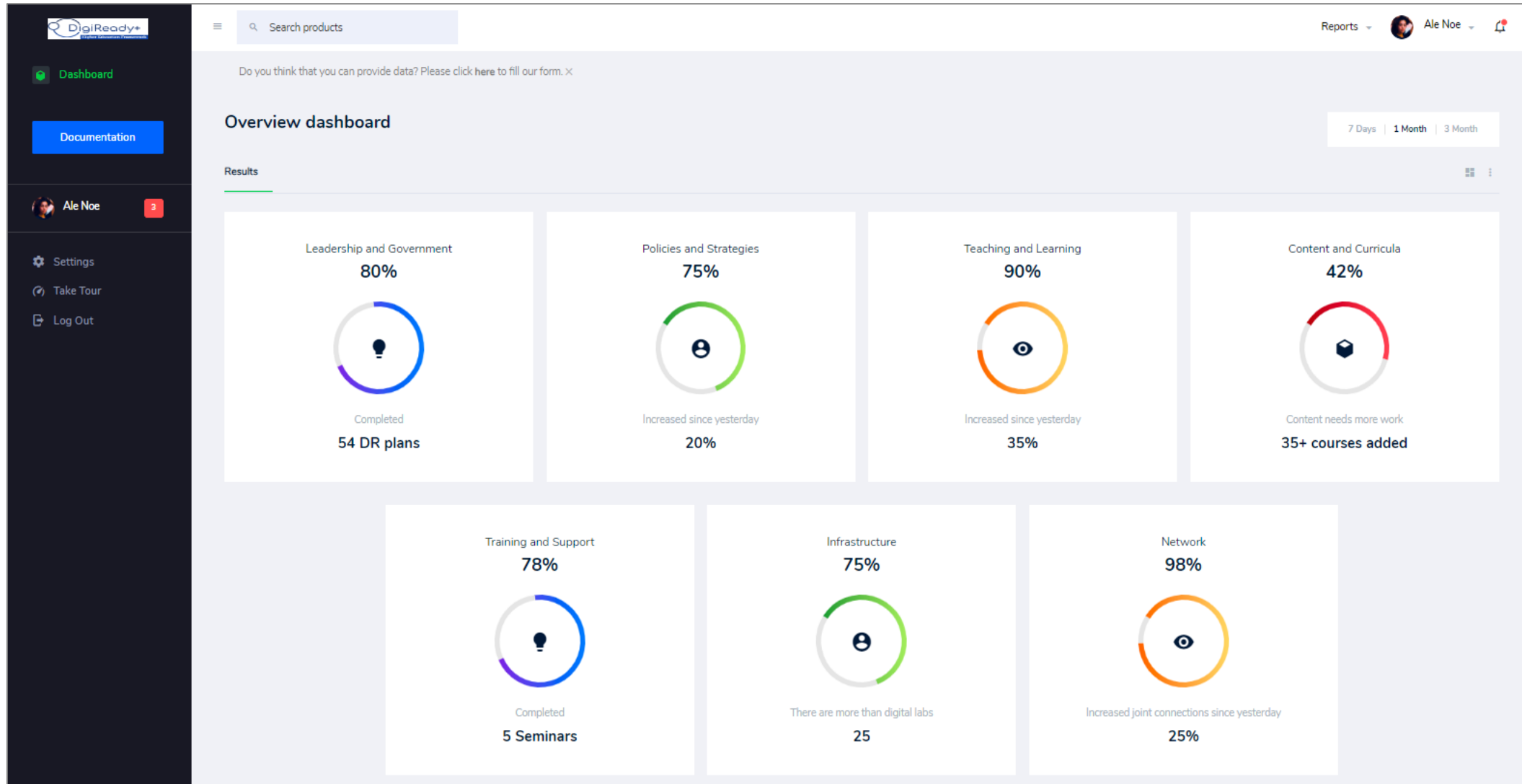
CONCLUSIONS

HEIs need to **remain competitive** in the rapidly evolving digital landscape.

This requires having a **strong online presence** and ensuring that **digital technologies are integrated seamlessly** into all aspects of the institution's operations, including teaching and learning, research, administration, and communication.

HEIs need to develop a **comprehensive digital strategy** that aligns with their overall mission and vision, and invest in the necessary infrastructure, tools, and skills aiming at improving digital readiness.

Digital Readiness requires a **culture of innovation and collaboration**.

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Thank you for your attention!

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