IBM Skills Network –
Scaling Global Upskilling Through the Open edX Platform

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Background

To meet the growing global demand for hands-on training in emerging technologies, IBM launched the Skills Network—an initiative aimed at upskilling millions of learners worldwide. With a focus on practical, high-impact learning experiences, IBM needed a flexible, scalable platform that could support both internal and external audiences. The Open edX platform became the foundation for this vision, enabling IBM to build a global learning ecosystem tailored to the needs of modern learners.

The Challenge

IBM aimed to help its global network of clients, partners, and employees build hands-on expertise in emerging technologies, especially AI, through accessible, scalable, and flexible learning. They needed a robust platform that could:

- Support **millions of learners** worldwide.
- Deliver **hands-on training** via labs and project-based content.
- Be **easily extended** and integrated with internal tools.
- **Provide infrastructure** for learning experiences like competitions and guided projects.
- Empower small teams to manage **large-scale deployments**.

The Solution

IBM adopted the Open edX platform as the foundation of the IBM Skills Network, a large-scale learning initiative now reaching over 9 million learners across 150+ customized portals deployed in six data centers on four continents.

Key reasons for choosing the Open edX platform included:

- **Scalability and maturity** – proven support for millions of learners.
- **Open-source flexibility** – enabled IBM to tailor features and integrate with lab environments, authentication systems, and internal infrastructure.
- **Strong community and modular architecture** – accelerated development of new features and streamlined upgrades.

Implementation and Impact

IBM developed a range of enhancements and services on top of the Open edX software, including:

- **Competition and Event Management System:** Powers global hackathons like IBM's "watsonx Challenge" with 176,000 participants, 34,000 teams formed and 12,000 project submissions.
- **Custom Authoring Tools:** Enable content creation, syndication, and project collaboration across portals.
- **AI Grader (Mark):** Assists with auto-grading of open-ended assignments and presentations at scale.
- **Multi-Tenant Offering (Skills Network for Teams):** Allows smaller organizations to launch private learning spaces without full instance deployment.

IBM uses Kubernetes and follows best practices (like Tutor) for deployment, ensuring streamlined scaling and maintenance.

Social and Business Impact

- **Corporate Learning & Internal Upskilling:** IBM employees globally use the platform for cutting-edge training, particularly in generative AI.
- **CSR & Global Reach:** IBM contributes to training 2 million learners in AI through social impact initiatives, collaborating with governments and NGOs in underserved regions like Indonesia and India.
- **High Learner Engagement:** With a completion rate of ~33–34%, IBM emphasizes feedback loops, AI-driven assistance, and learner experience optimization.

Future Plans

- Expand course formats with **guided projects**, **tutorials**, and **soft skills training**.
- Launch **Sumac-based upgrades** for improved features and compatibility.
- Continue evolving **AI tools** to meet growing demand and rapidly changing tech landscapes.

Key Takeaways

1. **The Open edX platform's modularity and community support** are critical for innovation and scale.
2. **Investing in internal capabilities** (like competition platforms, AI grading, and custom authoring tools) transforms the Open edX platform into a comprehensive skills ecosystem.
3. **Open source provides the agility** needed to stay ahead of fast-moving tech trends, especially AI.

IBM's Skills Network exemplifies how the Open edX platform can power high-impact, global learning initiatives that scale from a few users to millions, all while staying flexible, cost-effective, and learner-centered. By leveraging the platform's open architecture and robust feature set, IBM has been able to deliver dynamic, real-world learning experiences that support diverse audiences across industries and geographies. This case highlights the transformative potential of open-source education technology in fostering continuous, accessible, and scalable workforce development worldwide.