Regtech Skills Framework - Assessment & Recommendations Report

HKU FinTech
hkufintech.com

The University of Hong Kong
LITELAB
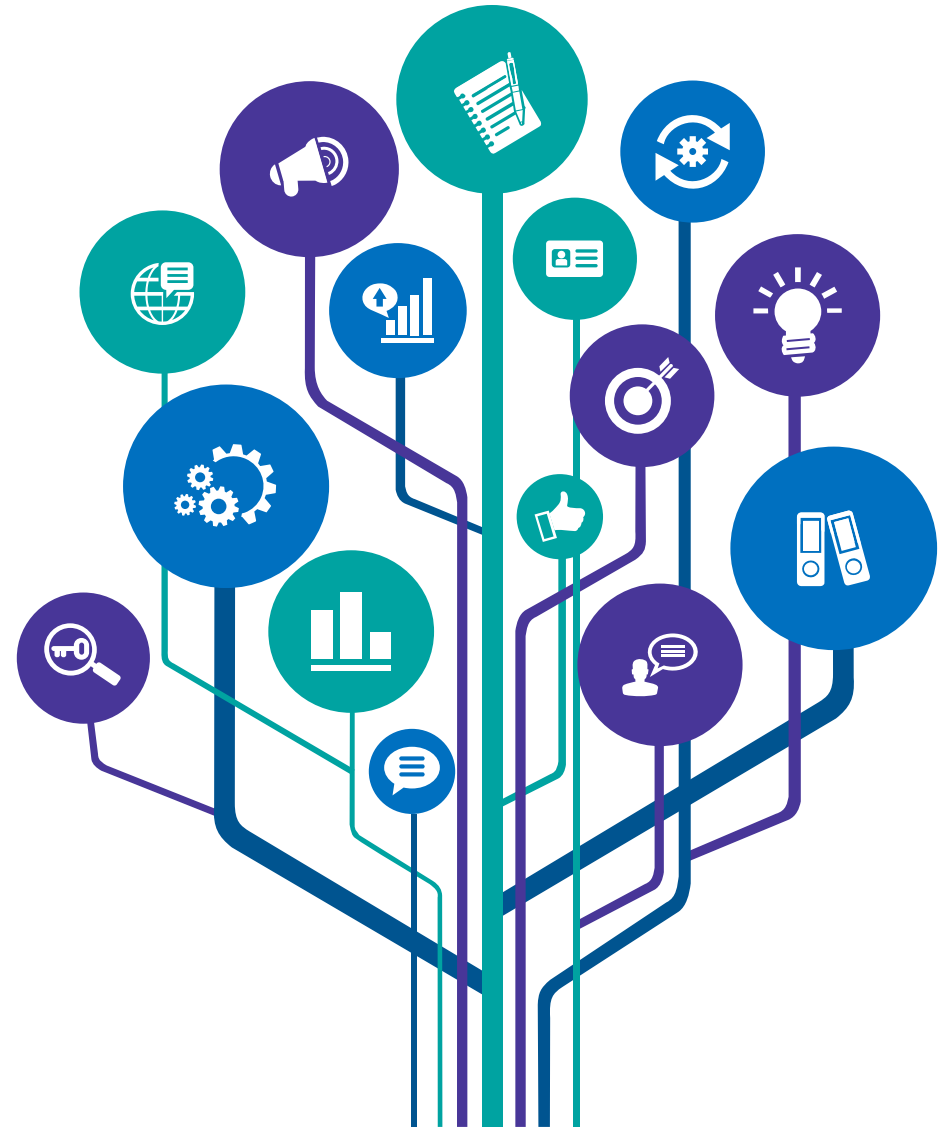Law | Innovation | Technology | Entrepreneurship

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Background

HKMA's White Paper and the RAI 2020 reported that the shortage of talent and relevant skillsets is a significant barrier to Regtech adoption in the Hong Kong banking sector.
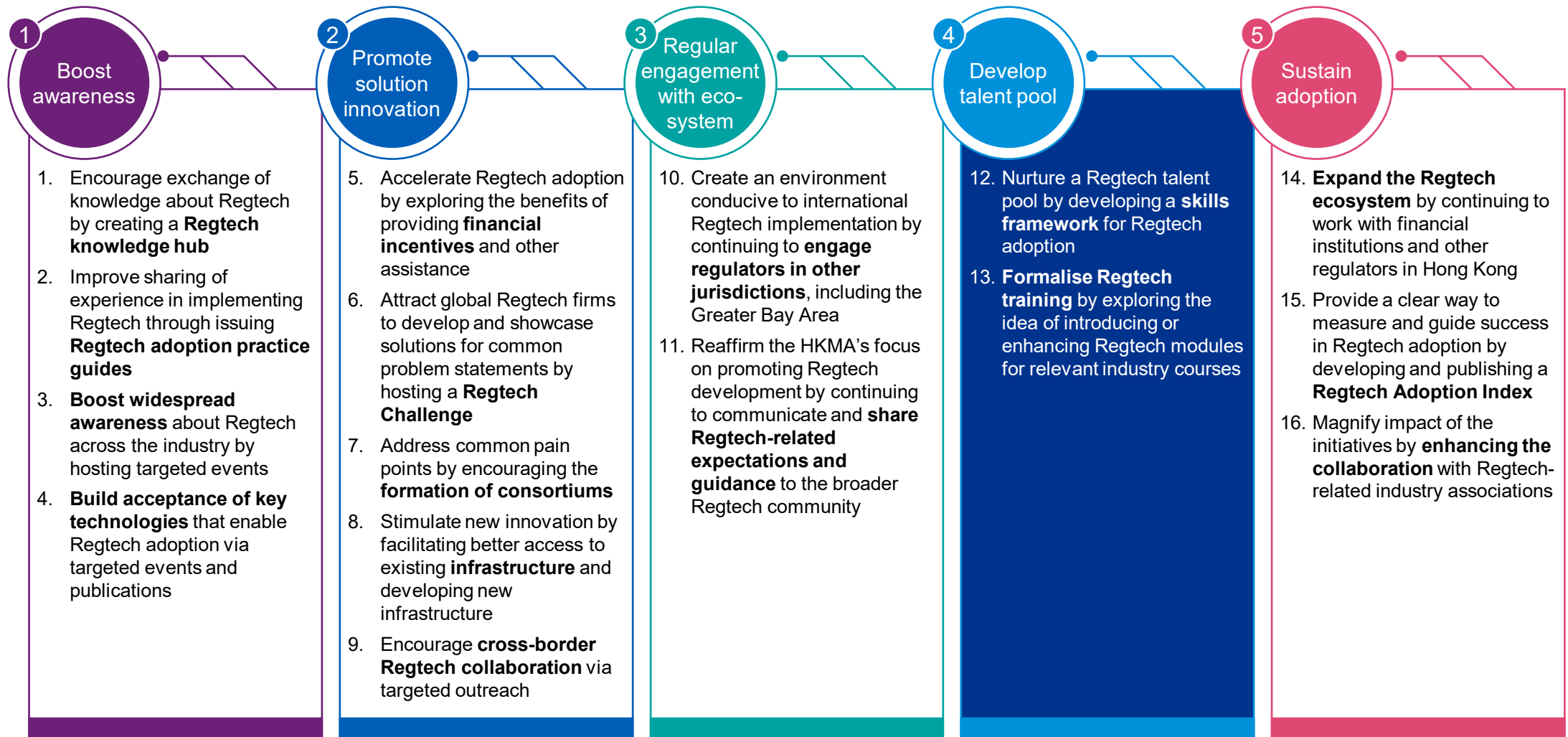
01

To promote Regtech adoption in Hong Kong, the HKMA commissioned research to develop a Regtech Skills Matrix along with recommendations

02

16 specific recommendations were proposed

1 Boost awareness

1. Encourage exchange of knowledge about Regtech by creating a **Regtech knowledge hub**
2. Improve sharing of experience in implementing Regtech through issuing **Regtech adoption practice guides**
3. **Boost widespread awareness** about Regtech across the industry by hosting targeted events
4. **Build acceptance of key technologies** that enable Regtech adoption via targeted events and publications

2 Promote solution innovation

5. Accelerate Regtech adoption by exploring the benefits of providing **financial incentives** and other assistance
6. Attract global Regtech firms to develop and showcase solutions for common problem statements by hosting a **Regtech Challenge**
7. Address common pain points by encouraging the **formation of consortiums**
8. Stimulate new innovation by facilitating better access to existing **infrastructure** and developing new infrastructure
9. Encourage **cross-border Regtech collaboration** via targeted outreach

3 Regular engagement with eco-system

10. Create an environment conducive to international Regtech implementation by continuing to **engage regulators in other jurisdictions**, including the Greater Bay Area
11. Reaffirm the HKMA's focus on promoting Regtech development by continuing to communicate and **share Regtech-related expectations and guidance** to the broader Regtech community

4 Develop talent pool

12. Nurture a Regtech talent pool by developing a **skills framework** for Regtech adoption
13. **Formalise Regtech training** by exploring the idea of introducing or enhancing Regtech modules for relevant industry courses

5 Sustain adoption

14. **Expand the Regtech ecosystem** by continuing to work with financial institutions and other regulators in Hong Kong
15. Provide a clear way to measure and guide success in Regtech adoption by developing and publishing a **Regtech Adoption Index**
16. Magnify impact of the initiatives by **enhancing the collaboration** with Regtech-related industry associations

Once delivered, it will enable the "Regtech 2025" vision

Lead

Adopt

Grow

Nurture

Lead - Hong Kong as a **global leader** in Regtech

Adopt - **Extensive adoption** of Regtech in the Hong Kong banking sector

Grow - **Breeding ground** of Regtech solutions for financial institutions

Nurture - Hong Kong as a **hub for nurturing Regtech talent**

Approach and What we found...

The Regtech Skills Matrix comprised of 38 critical Regtech skills

Soft Skills Domain (5)

- Agility
- **Collaboration**
- Curiosity
- Influencing
- **Innovation**

Compliance Skills Domain (3)

- **Regulatory and Business Requirements Conversion into Application Controls and Automated Solutions**
- Policy Development Incorporating Regtech Requirements
- Regtech Policy and Control Gap Analysis

Business Skills Domain (13)

- Agile Project Management
- Business Analysis to feed into Solutions Architecture
- Change Management
- Collaboration with External Stakeholders
- Collaboration with Internal Stakeholders
- **Customer Experience**
- **Cyber Awareness**
- **Process Automation**
- Product Lifecycle
- Regtech Maturity Analysis
- Regtech Vendor Identification
- Use Case Identification
- Vision Articulation to Vendors

Technology/Data Skills Domain (17)

Architecture
- **Application Programming Interface (API)**
- **Centralised Platform and System Integration**
- Cloud-technology Architecture
- Data Architecture
- Enterprise Architecture

Cyber Security
- **Cyber Security Framework and Architecture**

Data & Analytics
- Advanced Analytics and Predictive Analysis
- Biometrics and Facial Recognition Technologies
- Build/Develop Analytics Dashboards
- Data Mapping
- Machine Learning
- Optical Character Recognition (OCR)

Development
- Programming: Back-end Development
- Programming: Front-end Development

Digital Transformation/Automation
- Front-end User Interface Design to Integrate Regtech into the Customer Journey
- Robotic Process Automation/Automation Tools
- Workflow Automation Tools

Using the matrix a Skills Assessment identified skills gaps in the market

Skills Assessment Research Scope

- **Survey** findings from 158 banks (conventional banks and virtual banks) and 34 Regtech providers
- **Two focus groups** with 21 individuals from a range of banks and Regtech providers

Regtech Skills Recommendations Report

- **Highlights** skills gaps identified from the Skills Assessment
- **Provides comparison** of the three respondent groups (conventional banks, virtual banks, and Regtech providers) in the Regtech ecosystem to provide further insights into talent development trends and opportunities
- **Provides recommendations** to address these skills gaps

Current state of the Regtech talent development in Hong Kong

Significant opportunity for further Regtech development as the industry is at the developmental stage of Regtech adoption. Skill gaps are observed across all 38 critical skills for Regtech adoption, across the four Skills Domain.

Opportunity for Regtech talent development	45% of skills gaps identified in critical areas	Top 3 skills gaps
▪ Skills gaps are identified in all 38 skills in the Skills Matrix. ▪ Organisations generally view Basic or Intermediate proficiency levels as more important than Advanced levels.	▪ While skills gaps exist across all of the skills, the size of the gaps and their level of importance varies. ▪ Among the 38 skills gaps, 17 key skills gaps (highly important skills with severe skills gaps) are identified.	The top three skills gaps are: ▪ Regulatory and Business Requirements Conversion into Application Controls and Automated Solutions (Compliance Skill) ▪ Process Automation (Business Skill) ▪ Collaboration (Soft Skill)

Regtech is multi-disciplinary

Organisations recognise that a combination of non-technology skills and technology skills are required in the workforce to drive successful Regtech adoption.

Importance of multidisciplinary skills	Technology alone is not sufficient	Heightened focus on non-technology skills due to COVID-19 disruptions
▪ The average Skill Gap Score in Compliance Skills is the largest, followed by Soft Skills, Business Skills, and Technology/Data Skills. ▪ Participants confirmed they are experiencing challenge in finding talent that possess the right combination of multidisciplinary skills.	▪ Skills gaps in the Technology/Data Skill domain is not as large as compared to other skill domains. ▪ Banks revealed in focus group discussions that they have been using different ways to manage the shortage of Technology/Data Skills, by outsourcing and leveraging their organisation's global teams.	▪ COVID-19 pandemic has transformed traditional ways of working and highlights the importance of Soft Skill development.

Clear differences on skills development & focus within the ecosystem

Survey data & focus group discussions revealed different stages of Regtech skill development and focus areas within the Regtech ecosystem among conventional banks, virtual banks and Regtech providers.

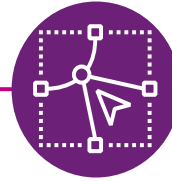| More pragmatic approach adopted by conventional banks	Smallest skills gaps reported by virtual banks	Strong need & intent to further develop Regtech skills among Regtech providers
▪ Assessment of each skill's Importance of Skill level, Depth of Current Skill Level, and Desire to Invest was generally lower than virtual banks or Regtech providers. ▪ Any system changes within conventional banks may imply significant consequences to their operations and stakeholders.	▪ Smaller skill gaps reported which is in line with virtual banks' more advanced Regtech adoption maturity. ▪ Typically newly established organisations without legacy infrastructure and systems, thus able to take a more aggressive approach in developing/acquiring Regtech-related skills.	▪ Regtech providers' average Depth of Current Skill Level Score is the same as virtual banks, indicating comparable skill levels. ▪ Regtech providers' average Desire to Invest Score and average Skill Gap Score are the highest among the three respondent groups.

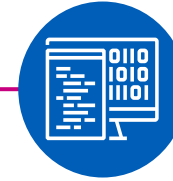# Recommendations to further talent development for Regtech adoption

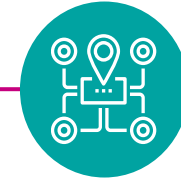Adopt a **Regtech-related Enhanced Competency Framework** to address the current skills gaps

Develop **Regtech training courses** based on the Regtech-related training curriculum of the ECF on Fintech

Establish an accreditation system to recognise eligible Regtech learning programmes in the industry

Ensure ongoing leadership commitment to further embed digital ways of working and drive further adoption of Regtech and skills development

Leverage existing Regtech communities of interest to encourage **greater collaboration** among participants in the Regtech ecosystem

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