

## MEDIA RELEASE

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### CONVENIENT & SECURE AUTHENTICATION OF EDUCATION & TRAINING CERTIFICATES THROUGH OPENCERTS

*First national-level initiative to facilitate authentication of digital certificates in Singapore*

**Singapore, 03 May 2019** — Starting from this year, all graduates will receive digital certificates for (i) N, O and A Levels, (ii) ITE qualifications, (iii) diploma and degree qualifications from polytechnics, LASALLE College of the Arts (LASALLE), Nanyang Academy of Fine Arts (NAFA), Autonomous Universities (AUs) and the National Institute of Early Childhood Development (NIEC), as well as (iv) Singapore Workforce Skills Qualifications (WSQ). These digital certificates will be stored in the Skills Passports of their individual MySkillsFuture accounts. When they use these certificates for job applications, employers will be able to quickly and easily verify these digital certificates through OpenCerts ([opencerts.io](https://opencerts.io)). This was announced by Minister for Education, Ong Ye Kung, at Temasek Polytechnic's Graduation Ceremony this morning.

2. Jointly developed by SkillsFuture Singapore (SSG), Government Technology Agency (GovTech), Ngee Ann Polytechnic (NP), and the Ministry of Education (MOE), OpenCerts is an initiative in support of Smart Nation, to develop deep tech solutions benefiting Singaporeans. Please refer to [Annex A](#) for a list of the 18 institutions and agencies onboard Project OpenCerts. This is the first time blockchain technology has been harnessed for use at the national level, and it was first piloted in 2018 by GovTech and NP, to develop and trial the use of blockchain technology for secure and reliable digital certificate verification. The first batch of digital certificates was issued to NP's graduating cohort last year.

3. With OpenCerts, individuals will receive digital certificates which will each have a unique cryptographic proof embedded within for secure verification. They will no longer need to obtain certified true copies of their education and training certificates for job and academic admission applications. Individuals can instead provide potential employers with digital certificates issued by these institutions. These digital certificates can be easily verified by employers directly through the OpenCerts platform ([opencerts.io](https://opencerts.io)), which will check the certificate data against its code on the blockchain for validity and to detect any

signs of tampering. This automatic verification will simplify and reduce administrative processes and physical paperwork for employers. Local educational institutions will also save time and costs by not having to manually verify issued certificates from individuals. Annex B includes more information about the digital certificates and how they work.

4. Upon completing and graduating from participating institutions and schools, learners and students will have their issued digital certificates automatically populated onto their Skills Passport, which is available on both the MySkillsFuture Portal and Mobile App, when the students graduate and their certificates have been issued by the schools. The Skills Passport will serve as a single digital repository for education and training certificates. It enables all Singaporeans to track their current skillsets and plan for future skills development.

5. “With OpenCerts and the Skills Passport, individuals will be able to securely and conveniently store and manage their education and training certificates on a single platform. It is particularly useful in helping them review their current skillsets, and plan for future skills upgrading. Employers will also have a reliable source to verify certificates submitted by candidates and employees. This is an important milestone for SSG and our partners as we continue to enable Singaporeans to take personal ownership of their skills development,” said Mr Ng Cher Pong, Chief Executive, SSG.

6. “OpenCerts is another example of how the Government is harnessing technology to deliver secure and easy-to-use digital services for citizens and businesses. We see enormous potential for deploying the OpenCerts technology to develop secure and reliable certificate verification and issuance regimes in other sectors. We look forward to collaborating with industry and government agencies to develop further use-cases,” said Mr Kok Ping Soon, Chief Executive, GovTech.

7. “When we first piloted the use of blockchain for digital certificates as part of NP’s smart campus initiative, this technology in the education space was still relatively new and unexplored. We are privileged to have played a pivotal role in turning this ground-up initiative into a national project. We are excited that our pilot has been a catalyst for the education sector as a whole to leverage this technology to improve work processes and make life easier for citizens,” said Mr Clarence Ti, Principal, Ngee Ann Polytechnic.

For media queries please contact:

SkillsFuture Singapore

Shan Singam (Ms)  
Senior Manager, Corporate & Marketing  
Communications Division  
SkillsFuture Singapore  
Tel: 92991127  
Email: [Shan\\_Singam@ssg.gov.sg](mailto:Shan_Singam@ssg.gov.sg)

Yvonne Pang (Ms)  
Assistant Director, Corporate & Marketing  
Communications Division  
SkillsFuture Singapore  
Tel: 90626082  
Email: [Yvonne\\_Pang@ssg.gov.sg](mailto:Yvonne_Pang@ssg.gov.sg)

GovTech

Mehul Shah (Mr)  
Assistant Manager, Communications &  
Marketing Group  
Government Technology Agency  
Tel: 9835 1434  
Email: [Mehul\\_Shah@tech.gov.sg](mailto:Mehul_Shah@tech.gov.sg)

Roy Teo (Mr)  
Senior Manager, Communications &  
Marketing Group  
Government Technology Agency  
Tel: 9105 0123  
Email: [Roy\\_Teo@tech.gov.sg](mailto:Roy_Teo@tech.gov.sg)

Ngee Ann Polytechnic

Sangeetha Naidu (Ms)  
Manager, Media & Content  
Ngee Ann Polytechnic  
Tel: 6460 6232  
Email: [sangeetha\\_naidu@np.edu.sg](mailto:sangeetha_naidu@np.edu.sg)

Hafeez Sim (Mr)  
Assistant Manager, Media & Content  
Ngee Ann Polytechnic  
Tel: 6460 6261  
Email: [sim\\_hafeez\\_bin\\_faisal@np.edu.sg](mailto:sim_hafeez_bin_faisal@np.edu.sg)

**About SkillsFuture Singapore**

SkillsFuture Singapore (SSG) drives and coordinates the implementation of the national SkillsFuture movement, promotes a culture of lifelong learning and strengthens the ecosystem of quality education and training in Singapore. Through a holistic system of national SkillsFuture initiatives, SSG enables Singaporeans to take charge of their learning journey in their pursuit of skills mastery. SSG also works with key stakeholders to ensure that students and adults have access to high quality and industry-relevant

training that meet the demands of different sectors of the economy for an innovative and productive workforce. For more information, visit [www.ssg.gov.sg](http://www.ssg.gov.sg).

### **About Government Technology Agency of Singapore**

The Government Technology Agency of Singapore (GovTech) is a statutory board formed in October 2016 after the restructuring of the Infocomm Development Authority.

Following the formation of the Smart Nation and Digital Government Group in May 2017, GovTech is placed under the Prime Minister's Office as the implementing agency of the Group. GovTech works with public agencies to develop and deliver secure digital services and applied technology to individuals and businesses in Singapore. GovTech builds key platforms and solutions needed to support Singapore as a Smart Nation. As a leading centre for information communications technology and related engineering such as the Internet of Things, Data Science and Application Development, GovTech also enhances the capabilities of the Singapore Government in these domains.

For more information, please visit [www.tech.gov.sg](http://www.tech.gov.sg).

### **About Ngee Ann Polytechnic**

Ngee Ann Polytechnic started in 1963 and is today one of Singapore's leading institutions of higher learning with 15,000 enrolled students in over 40 disciplines. It seeks to develop students with a passion for learning, values for life, and competencies to thrive in a global workplace. For more information, visit [www.np.edu.sg](http://www.np.edu.sg).



## Annex A

### Participating Institutions

1	Institute of Technical Education
2	LASALLE College of the Arts
3	Nanyang Academy of Fine Arts
4	Nanyang Polytechnic
5	Nanyang Technological University
6	National Institute of Early Childhood Development
7	National University of Singapore
8	Ngee Ann Polytechnic
9	Republic Polytechnic
10	Singapore Institute of Technology
11	Singapore Polytechnic
12	Singapore Management University
13	Singapore University of Social Sciences
14	Singapore University of Technology and Design
15	Temasek Polytechnic
16	Singapore Examinations and Assessment Board
17	SkillsFuture Singapore
18	Government Technology Agency

**Annex B****How OpenCerts Works**

OpenCerts is a blockchain-based<sup>1</sup> platform developed by SkillsFuture Singapore (SSG), Government Technology Agency (GovTech), Ngee Ann Polytechnic (NP), and the Ministry of Education (MOE). The platform offers an easy and reliable way to issue and validate certificates that are tamper-resistant.

Certificates issued by OpenCerts contain the following information:

- I. Certificate Name: Name of completed education course
- II. Issuer's Identity: Name of institution that published the digital certificate
- III. Transcript: Modules and results achieved
- IV. Recipient's Identity: Name of student who received the digital certificate
- V. Tamper-proof Signature: A means of verifying the authenticity of the certificate
- VI. Metadata: Additional data that do not fit into the standard categories of Information

When an OpenCerts certificate is issued, a unique code is published onto the blockchain. A cryptographic proof<sup>2</sup> is appended onto the certificate data and sent to the individual recipient. During verification, the certificate data is checked against its proof for signs of tampering and against the code on the blockchain for validity.

Built on open source and standards, educational institutions can easily create digital versions of every certificate that has been or will be issued, and publish them on a public ledger<sup>3</sup>.

Scan the QR code or visit [opencerts.io](https://opencerts.io) to find out more about the technology and process behind OpenCerts.



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<sup>1</sup> Blockchain is a tool for digitally recording transactions, be it between a buyer and seller, or in this case an educational institution and its graduates. A public blockchain is neither owned nor maintained by an individual, and instead decentralised. This ensures that records made on it cannot be altered or destroyed by a single person.

<sup>2</sup> A cryptographic proof is a method by which one party can prove to another party that they know a value of the proof without being aware of any other details within the documentation.

<sup>3</sup> Public ledger is a database that is consensually shared and synced across multiple parties.