TRAINING OUTLINE

ITU CENTRES OF EXCELLENCE NETWORK FOR ASIA PACIFIC REGION

Distributed Ledger Technologies (Blockchain) Ecosystem and Decentralization
3-6 September 2018, Bangkok, Thailand

COURSE DESCRIPTION

Title	**Distributed Ledger Technologies (Blockchain) Ecosystem and Decentralization**
Method of delivery	Face-to-face
Objectives	• To build knowledge of policy makers, regulators, industry and academia in the areas of blockchains and other Distributed Ledger Technologies (DLT); • To provide insight on enabling environment (policy, legislation and regulation), technologies, security and applications relating to DLTs; • To share use cases and experiences from application areas, e.g., finance, agriculture and telecom; • To build skills on 'creating a blockchain/DLT infrastructure and/or a decentralized application with a DLT'.
Dates	3-6 September 2018
Duration	4 days
Registration deadline	20 August 2017
Training fees	Free with support from NBTC (Thailand) and MDES (Thailand)
Course code	

LEARNING OUTCOMES

Upon completion of this training, participants will be able to understand

- How does DLT or decentralized application (dApp) work?
- What are the key ecosystem enablers (stakeholders, policies, regulations, technologies and applications) driving distributed ledger technologies (DLTs)?

- What is the level of maturity and what are the development trends?
- What are the scenarios for using DLT?
- How to determine whether you need DLT to solve a particular problem?
- What transformative effect will this technology have on the market in the short and long term?

Special attention will be paid to issues of ensuring information security and new threats specific to the technology, which are not typical for traditional information systems.

It will also build skill on

- Which DLT platforms exist and how to choose the configuration of the DLT that you need for your decentralized application (dApp)?

TARGET POPULATION

Staff from policy makers, regulators, industry and academia engaged with blockchain or Distributed Ledger Technologies (DLT).

FACILITATOR/EXPERTS

The training will be conducted by ITU experts.

EVALUATION

The assessment of the participants shall be based on the - time spent on the training and the following parameters:

Evaluation Parameter	Weightage (in %)
Quizzes and presentations	60 %
Attendance	10 %
Participation	30 %

The minimum passing requirement for certificate is 60%.

DRAFT TRAINING SCHEDULE AND CONTENTS / AGENDA
(Updated information will be available at http://www.itu.int/itu-d/asp)

DRAFT AGENDA

3 September 2018 (Day-1)	
0800-0900	**REGISTRATION**
0900-1030	**Opening session:** - **ITU** - **NBTC** Group Photo
1030 – 1115	**Session 1: Understanding the technology behind DLT** Objective: To provide a technical overview of DLT: blockchain, consensus algorithm, smart contract, directed acyclic graph (DAG), decentralized application (dApp), token… - Dr. Jean-Marc Seigneur
1115-1145	**Coffee break**

1145 – 1230	**Session 2: DLT ecosystem, applications and use cases** Objective: To provide a practical overview of DLT applications, use cases and experiences. - Dr. Leon Perlman
1230-14:00	**LUNCH**
14:00-15:00	**Session 3: Designing a decentralized application (dApp) with a DLT** Objective: To learn how to select the most appropriate DLT for a specific dApp and get an overview of current DLT development platforms. - Dr. Jean-Marc Seigneur
1500-1530	**Coffee break**
1530-1700	**Session 4: Working group exercise** Objective: After creating small teams, each team starts designing its dApp, selecting the most appropriate DLT and development platform. - Dr. Jean-Marc Seigneur

4 September 2018 (Day-2)
0900-1030	**Session 5: DLT Applied to Cryptocurrencies** Objective: To provide an overview of the existing cryptocurrencies as well as their tools - Dr. Jean-Marc Seigneur
1030-1100	**Coffee break**
1100-1230	**Session 6: Initial Coin Offering (ICO), Token Generation Event (TGE) and Tokenomics** Objective: To learn the main steps of an ICO/TGE, understand their risks and be able to define the tokenomics of a dApp or DLT project. - Dr. Jean-Marc Seigneur
1230-1400	LUNCH BREAK
1400-1500	**Session 7: Application and use cases of DLT in other sectors** Objective: To share experiences on application of DLT in other sectors, e.g., agriculture, telecom… - Mr. Gerard Sylvester, *Regional Knowledge and Information Management Officer,* FAO Regional Office for Asia-Pacific - Dr. Suporn Pongnumkul, Senior Researcher of Computational Process Analytics Research Laboratory, NECTEC
1500-1530	**Coffee break**
1530-1700	**Session 8: Working group exercise** Objective: Each team refines the tokenomics of their dApp and depicts the main steps of their potential ICO or TGE. - Dr. Jean-Marc Seigneur
1700-1730	**QUIZ 1**

	5 September 2018 (Day-3)
0900-1030	**Session 9: DLT Policy, legislation and regulation** Objective: To provide an overview of DLT policies, legislation and regulations. - Dr. Leon Perlman
1030-1100	**Coffee break**
1100-1230	**Session 10: DLT Security Issues** Objective: To provide an overview of security issues in DLTs. - Dr. Leon Perlman
1230-1400	LUNCH BREAK
1400-1530	**Session 11: Working group exercise** Objective: Each team starts preparing their presentation for tomorrow final session. - Dr. Jean-Marc Seigneur
1530-1600	**Coffee break**
1600-1700	**Session 12: Working group exercise** Objective: Each team finalizes their presentation for tomorrow final session. - Dr. Jean-Marc Seigneur
1700-1730	**QUIZ 2**

	6 September 2018 (Day-4)
0900-1000	**Session 13: DLT Trends** Objective: To give an overview of the most recent trends in DLT - Dr. Jean-Marc Seigneur
1000-1030	**Coffee break**
1030-1200	**Session 14: DLT Use case presentations** - Mr. Pavan Gupta, Joint Advisor,Telecom Regulatory Authority of India
1200-1300	LUNCH
1300 - 1430	**Session 15: Working group exercise** Objective: Each team presents their DLT/dApp project to all attendees. - Dr. Jean-Marc Seigneur

Practice:

Development of a business case/dApp with DLT including its tokenomics as part of the different working group exercises

METHODOLOGY

The face-to-face programs will include
- Instructor-led presentations,
- Case studies,
- Working group exercises

TRAINING COORDINATION

ITU coordinator:

Mr. Ashish Narayan
Program Co-ordinator
ITU Regional Office for Asia & the Pacific
5th Floor, Thailand Post Training Centre, 111Moo3 Chaengwattana Road, Laksi Bankok 10210,Thailand
Tel: +66 257 500 55, FAX: +66 257 535 07
 Email: ashish.narayan@itu.int

NBTC Coordinator:

Ms. Salita Roitheang
The Office of NBTC
87 Soi Phaholyothin 8, Samsen Nai, Phayathai, Bangkok 10400 Thailand
Email: Salita.R@nbtc.go.th

Ministry of Digital Economy and Society (Thailand) coordinator:
Ms. Tharinee Limpibunterng
Senior Director, Business Development and Planning Sector
TOT Academy
Tel: +66 2596 1104, Fax: +66 2591 8087
Email: thalimne@tot.co.th

REGISTRATION

Registration on ITU Academy Portal

Application to participate in this course should be made at "https://academy.itu.int" by following the steps:

Skip STEP 1, *if you already have a username and password*

Step 1: Create a new account in the ITU Academy portal at
https://academy.itu.int/index.php?option=com_hikashop&view=user&layout=form&Itemid=559&lang=en.

After completing the registration form, a message will be sent to your e-mail address inviting you to log in to the platform.

Step 2: Once you are logged in, you can search for the course in the training catalogue or directly proceed to the course link:
https://academy.itu.int/index.php?option=com_joomdle&view=coursecategoryextended&cat_id=:&course_id=1174:broadband-mobile-and-internet-of-things-network-planning&Itemid=476&lang=en

Step 3: Click on "Enroll me into this course" and type in the following enrolment key: 17WS20616ASP-E. You will then be able to access the course page.

Please note that online registration should be done before 20 August 2017..