

EdViCon



Portable Video Conferencing Toolkits & Online Applications for Engaging Higher Education Classrooms



EdViCon



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**Portable Video Conferencing Toolkits and Online
Applications for Engaging Learning Experience Design in
Higher Education Classroom**

EdViCon Toolkits: Infographics of Recommended Portable Video Conferencing Tools for Hybrid and Online Teaching

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1.0 Introduction

R3.3 EdViCon recommendations include portable toolkits along with online tools for engaging students from the seven higher education institutions (HEIs) from Europe and Asia in the project in infographics format. The impact is achieved through multiplier events, project website, and social media (for example, LinkedIn and ResearchGate). The prototypes are expected to be transferable considering the diversity of teaching environments of the individual HEI's background. Only parts of the toolkits' use, or online tool-mediated teaching might not be transferable in all contexts of use due to the restrictions posed by the lack of access to electricity, Internet, device, etc.

2.0 List of Prototypes for the Seven higher education institutions (HEIs) from Europe and Asia

2.1 DTU Toolkits and Engagement Tools

2.2 NTNU Toolkit

2.3 AMU Toolkit

2.4 ANNU Video Conference Toolkits for Online and Hybrid

2.5 MFU Toolkit

2.6 UiTM Toolkit for Online and Hybrid

2.7 ULAB Toolkit

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THAI CONTEXT PORTABLE VIDEO CONFERENCING TOOLKITS

Hybrid Learning Classroom Enhancement



1 15 inches Portable Monitor \$140

2 Laptop computer \$1000

3 Wireless microphone set \$20

4 Condenser microphone \$60

5 Trackable tripod for mobile \$15.6

6 HD Web Camera with light \$100

7 Mirror cast device \$10

8 Mini tripod for mobile \$10

9 Tripod for mobile \$10

THAI CONTEXT PORTABLE VIDEO CONFERENCING TOOLKITS

Hybrid Learning Recording Enhancement



1 15 inches Portable Monitor \$140

2 Laptop computer \$1000

3 Wireless microphone set \$20

4 Condenser microphone \$60

5 Trackable tripod for mobile \$15.6

6 HD Web Camera with light \$100

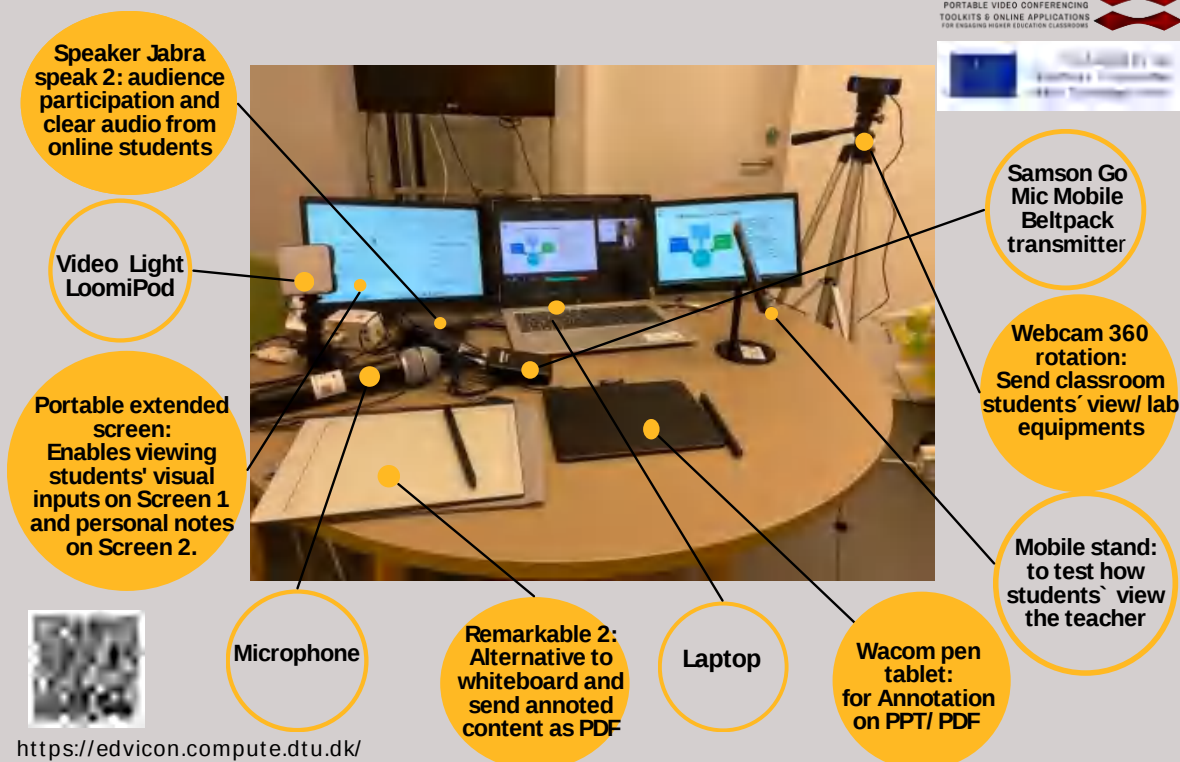
7 Ring light \$15.6

8 Mini tripod for mobile \$10

9 Tripod for mobile \$10

Danmarks Tekniske Universitet Portable Video Conferencing TOOLKIT- 1

Portable Video Conferencing Toolkits for Danish Context
Scenarios: (1) Hybrid (F2F + Online) and
(2) Laboratories & Traditional Classroom



Tools	Price in DKK	Price in USD
1. Extended Screen	2352	328
2. Remarkable 2	2790	389
3. Wacom pen tablet	609	85
4. Microphone	1795	250
5. Samson Go mic mobile belt pack transmitter		
6. Speaker Jabra 2	902	126
7. Video light	239	33
8. Webcam 360 rotation	1120	156

Danmarks Tekniske Universitet

Portable Video Conferencing TOOLKIT- 2

Portable Video Conferencing Toolkits for Danish Context
Scenario: Online (No face2face student) – Home & Other

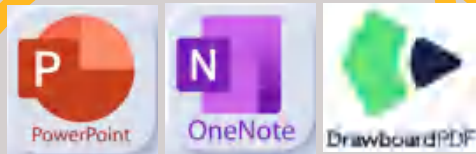


Tools	Price in DKK	Price in USD
Extended Screen	2352	328
Jabra speaker 2	902	126
Sony wireless headphone	2189	305
Wacom pen tablet	609	85
Mobile holder	79	11
Leitz easy flip foil	267	30,15

Video-Conferencing and Student-Engagement Software Used at Technical University of Denmark



Video-Conferencing Software



Alternatives to White/Blackboard & Annotated Content Presentation



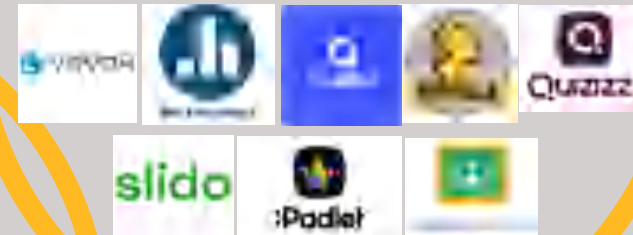
Xournal++



Visual Content Creation and Interaction



Online/Hybrid Student-Engagement Platforms



PORTABLE VIDEO CONFERENCING TOOLKIT

For online and hybrid classes

amU
Aix - Marseille - Université

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PORTABLE VIDEO CONFERENCING
TOOLKITS & ONLINE APPLICATIONS
FOR ENGAGING HIGHER EDUCATION CLASSROOMS

Laptop/Desktop

To run the session

Latitude 3520 - Intel Core i5 - 1145G7 / 2.6
GHz - Win 10 Pro 64 bits (comprend
Licence Win 11 Pro) - Intel Iris Xe - 16 Go
RAM - 512.
€1,204.74 EUR



AI Powered Webcam

To allow instructor to move around and always be in focus

AVer DL10
€521, 55



Camera stand

Cameras Multi-Direction with Adjustable Height

CoreParts Tripod Stand 40cm-120cm
€40.50



Docking Station

In order to connect more devices

BELKIN 11-in-1 USB-C Docking Station with
Triple Display
€113, 65

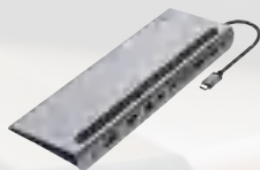


Table mic

Picks up sound from all participants in the room

JABRA SPEAKER
€104.74 EUR



Microphone

Fixed position close to the lecturer

HyperX SoloCast streaming microphone
with stand
€55



Wi-fi booster/Wi-fi Extender

A wi-fi buster helps when the Wi-fi is instable

€45



Electrostatic polypropylene film

It can be used on various surfaces
Flip Folie
€50.57



BLUETOOTH WIRELESS MICROPHONE WITH SPEAKER

The device allows educator to move
freely around the classroom while
ensuring clear audio delivery.

€50.57



CAMERA FOR DOCUMENTS

Visualization of documents in high
resolutions

€150



videoconferencing
solution



Scan for more



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<https://edvicon.compute.dtu.dk>



Speaker and Microphone (ja)

327.2 \$



Mi Wi-Fi Range Extender Pr

33.2 \$



HP Victus 16 Gaming

2030 \$



Logitech Zone Vibe 100 Wir

85 \$



Infinity Power Supply UPS 6

87 \$



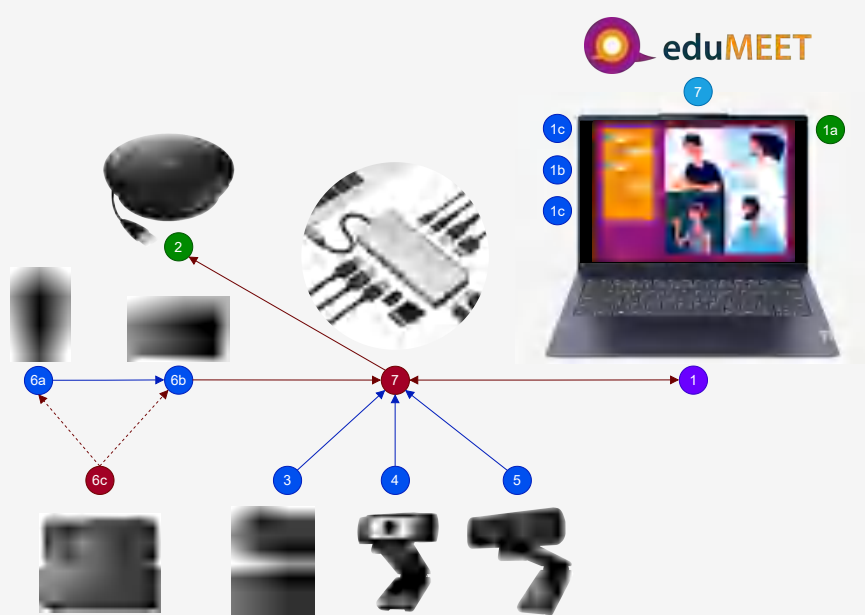
Logitech Pro HD Webcam C

106.72 \$



Hybrid teaching scenario for plenary and collaborative work

portable videoconferencing toolkit



	Type of component	Brand and model	Price, €	Reasoning
1	Laptop	IdeaPad 5i 2-in-1 Gen 9	606 €	Running the session
1a	Integrated screen			Screencasting the instructor
1b	Integrated camera			
1c	Integrated touchpad			
2	External speaker	Jabra Speak 510 MS	42 €	Producing higher volume audio for local participants
3	External camera	Obsbot Tiny 2 Lite	258 €	To allow instructor to move around and always be in focus
4	External camera	Logitech C925e	88 €	To view the class/group of participants
5	External camera	Logitech c930	88 €	To view demonstrations and other prep.
6a	Wireless microphone	DJI mic 2	292 €	To allow instructor to move around. Constant distance mouth to microphone
6b	Wireless microphone receiver	DJI mic 2		
6c	Microphone charger	DJI mic 2		
7	USB-C Multi-adaptor	Plexgear Multiadapter	41 €	To extend a number of connections to laptop
8	Videoconferencing software	EduMEET	0 €	To run the videoconference with multiple cameras free of charge

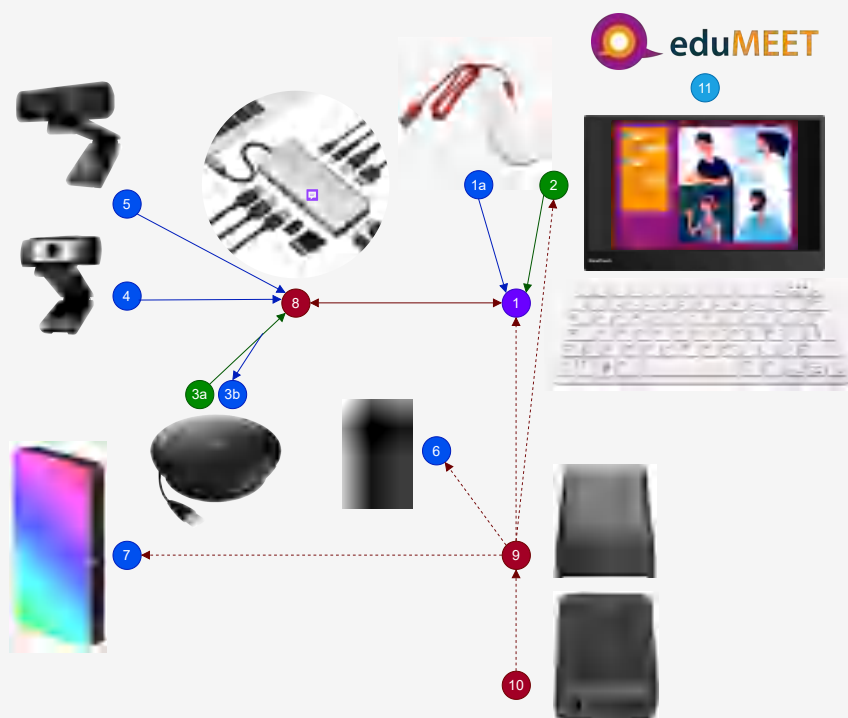
● Input devices
 ● Output devices
 ● Power and adaptors
 ● Computer
 ● Software



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Low cost off the grid portable videoconferencing toolkit



	Type of component	Brand and model	Price, €	Reasoning
1	Computer	Raspberry Pi 400	95 €	Running the session
1a	Mouse	Raspberry mouse		
2	External screen	Pepper jobs XtendTouch16	234 €	To view the screen and in general have access to all the features of a computer
3a	External speaker	Jabra Speak 510 MS	42 €	Producing higher volume audio for local participants
3b	External microphone	Jabra Speak 510 MS		
4	External camera	Logitech C925e	88 €	To view the presenter/teacher
5	External camera	Logitech c930	88 €	To view the class/group of participants
6	Modem	TP Link 4G modem	51 €	To provide WiFi off grid. SIM in, WiFi out
7	Light	Ulanzi LT002 7" RGB LED Video Light B01002	43 €	
8	USB-C Multi-adapter	Plexgear Multiadapter	41 €	To extend a number of connections to laptop
9	Power bank	Linocell Premium Powerbank 100w PD	55 €	Power off the grid
10	Charger	Linocell Premium GaN Multilader	52 €	Charging units while on the grid
11	Videoconferencing software	EduMEET	0 €	To run the videoconference with multiple cameras free of charge

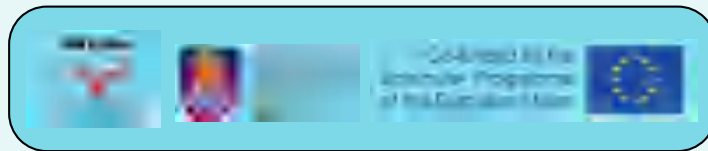
● Input devices
 ● Output devices
 ● Power and adapters
 ● Computer
 ● Software

<https://edvicon.compute.dtu.dk/>

NTNU
 Norwegian University of
 Science and Technology

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PORTABLE VIDEO CONFERENCING TOOLKITS



**Online video
conferencing toolkit**



**Hybird video
conferencing toolkit**

Portable Video conferencing toolkits for online and hybrid classes



LAPTOP / DESKTOP

Laptop / Desktop is the main device connected to the video conferencing platform.



EXTENDED SCREEN

Extended screen helps to increase the vision for multiple displays



WRITING PAD & STYLUS PEN

iPad /tablet / writing pad, and stylus pen is to provide a comfortable and efficient setup for writing, drawing, and note-taking



WI-FI BOOSTER / WI-FI EXTENDER

A Wi-Fi booster / extender is needed if the Wi-Fi signal is not stable.



EARPHONE WITH MICROPHONE

Earphones help reduce surrounding noise, while the microphone ensures clear voice quality.



BLUETOOTH WIRELESS MICROPHONE WITH SPEAKER

The device allows educator to move freely around the classroom while ensuring clear audio delivery.



AI-POWERED WEBCAM

AI-powered webcams can automatically adjust the frame to keep the speaker or active participants centered and in focus.

<https://edvicon.compute.dtu.dk/>



EdViCon: PORTABLE VIDEO CONFERENCING TOOLKITS



LAPTOP

Model: Macbook Air M3

The laptop is the primary device for connecting to the video conferencing platform.

PRICE : \$1099.00



Pen Tablet with Display

Model: Remarkable 2

Pen Tablet helps to draw like on a whiteboard or annotate in a pdf, image or word file.

PRICE : \$570.00



LAPTOExtended Screen

Model: OFIYAA Tri Screen

An extended screen allows flexible use of multiple software without switching.

PRICE : \$370.00



Noise Cancellation Headphones

Model: Sony WH CH720N

It help to eliminate external noises and be able to listen without any disturbances

PRICE : \$140.00



Noise Cancellation Headphones

Model: Sony WH CH720N

It help to eliminate external noises and be able to listen without any disturbances

PRICE : \$14.00



Speaker

Model: UBL

Speaker helps students listen to what is being told in a hybrid environment

PRICE : \$42.00



Wide-Angle Webcam

Model: logitech bri100

It helps to view the students and the whole class in a wide view

PRICE : \$21.00



WiFi Range Extender

It helps to extend the WiFi range and can be accessed from anywhere

PRICE : \$42.00



EdViCon: PORTABLE VIDEO CONFERENCING TOOLKITS



Apple iPad 8th gen
iPad is the primary device for connecting to the
video conferencing platform.
PRICE : \$452.00



Apple Pencil
Model: Remarkable 2
The Apple Pencil enables
precise drawing, writing, and annotation on
compatible iPads.
PRICE : \$107.00



Tablet Stand
Model: Jmary MT19
Ultra-thin and portable stand with adjustable
angles
PRICE : \$13.00



Noise Cancellation Headphones
Model: Sony WH CH720N
It help to eliminate external noises and be able
to listen without any disturbances
PRICE : \$14.00



Auto Face Tracker
Model: P02
Track teacher in hybrid class room.
PRICE : \$45.00

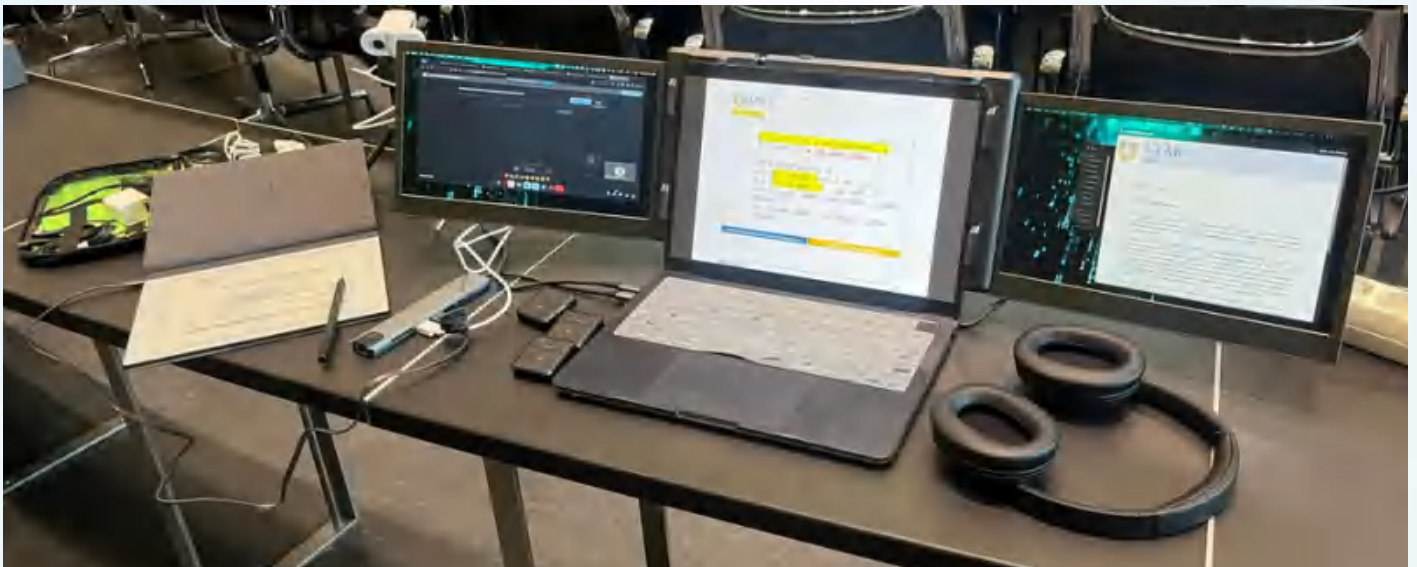


Drawing tablets
Model: Wacom One
It help to annotate mathematical equations in
Math class in Online and hybrid class
PRICE : \$72.00

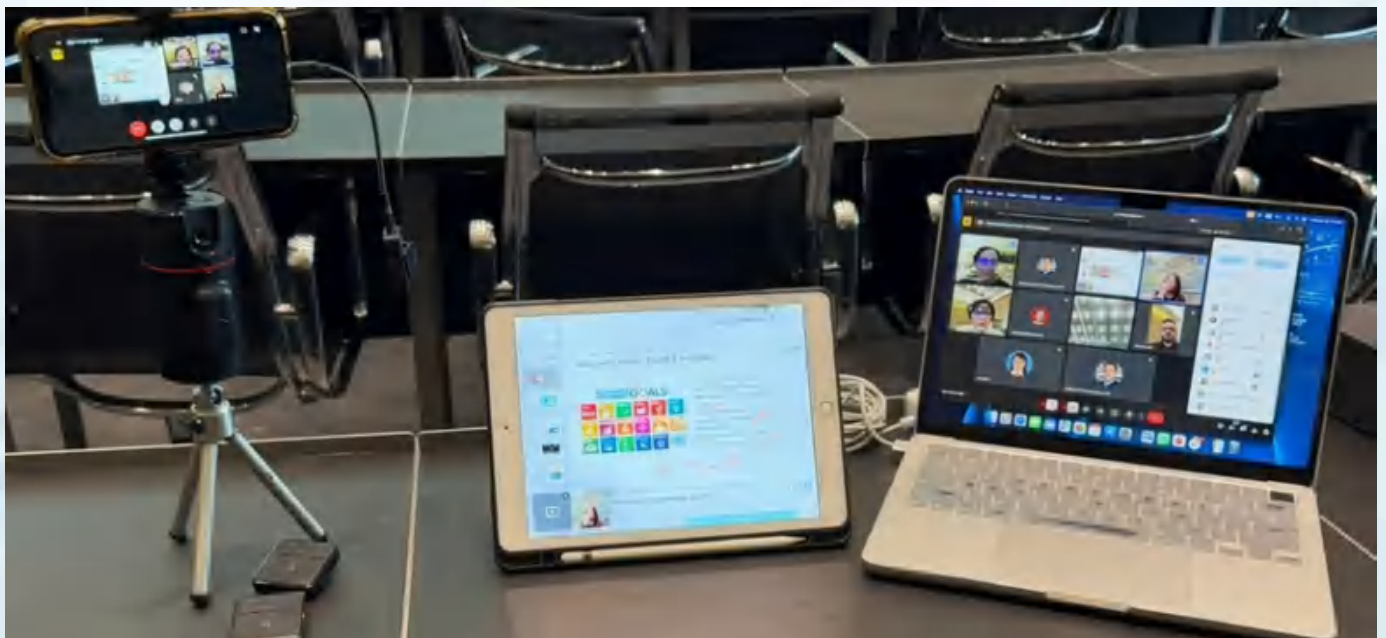


EdViCon: PORTABLE VIDEO CONFERENCING TOOLKITS

Two Scenarios of Video Conferencing Toolkits



Video Conferencing Toolkit for Online Class



Video Conferencing Toolkit for Hybrid Class