

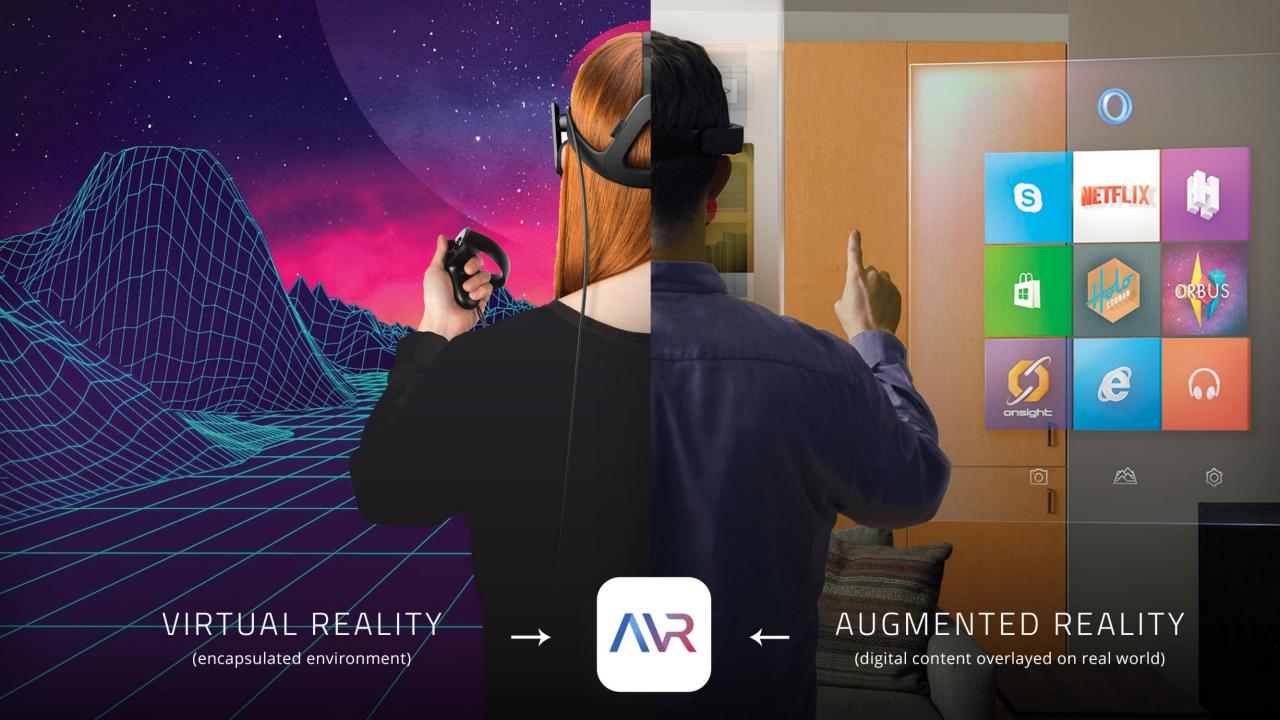
Academic Partnership Presentation

The World Leader In Augmented Virtual Reality (AVR) Based Knowledge Transfer

Company Highlights

- Market-leading Position: world leader in Augmented Virtual Reality (AVR) based knowledge transfer
- Proven Staged Strategy:
- **Eon Human 2.0** government solution that can uplift millions of smart student & smart workers
- Classroom 3.0 that enables academic institutions to help students Learn faster, remember longer and make better decisions and
- Industry 4.0 that enable enterprises to upskill their workers
- **Mission-driven Organization**: EON Human 2.0 is bridging the gap between man and machine
- Track Record With Blue-chip Customers: including Exxon, GSK, Honeywell, GE, Mercedes, China Merchant Group, NTU, J&J, Shell and Pearson.
- Massive, Disruptive And Growing Market: AVR \$100B by 2020.
- Enterprise-class Avr Saas Platform: Securely creates, stores, analyzes, distributes and publishes AVR agnostically fueled by AI, IoT and GIS
- Industry-leading Management Team: proven experience in Enterprise solutions, Education and ICT.
- Scalable Saas Based Platform: compound annual growth rate of the order values is expected to grow with over 50% annually over the next 3 years



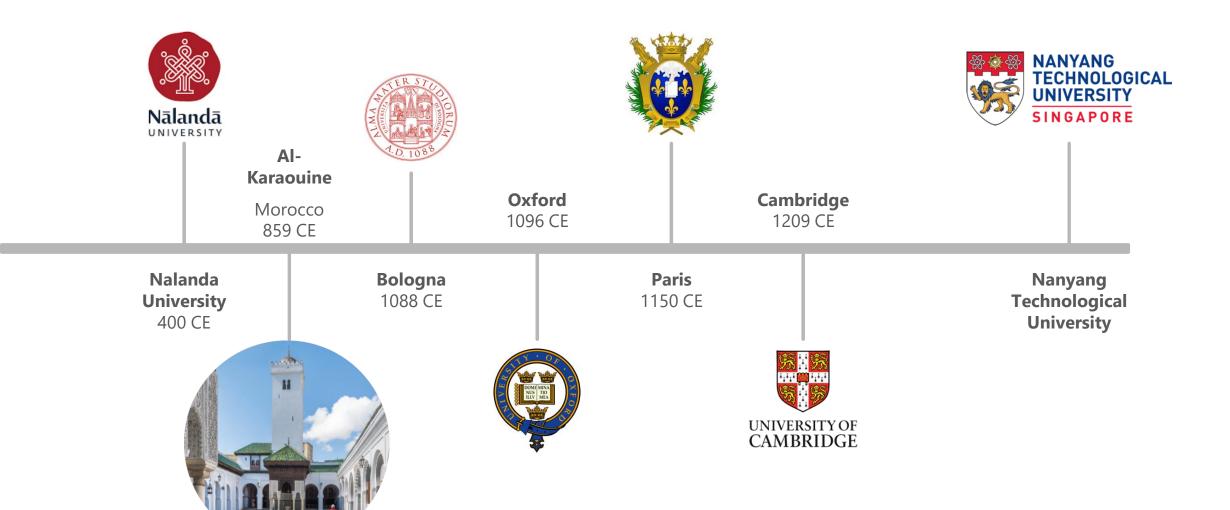




IDC Singapore Event April 27, 2019

The Academic Problem

Academic Institutions Date Back A Millennium...

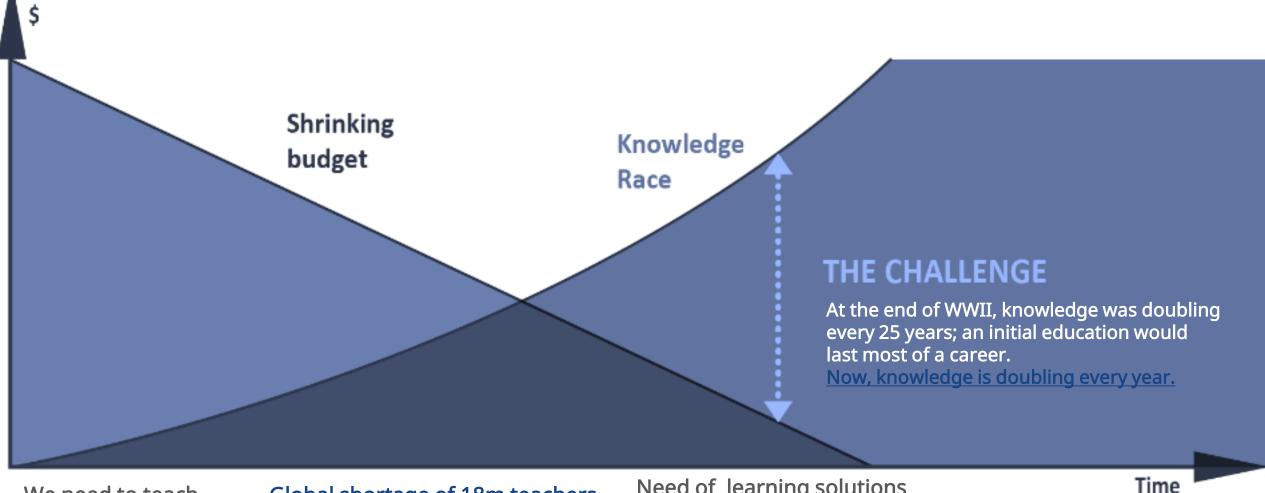


Academic Mission

Deliver research to solve challenges and Educate the next generation to do the same



The Quantitative Education Problem



We need to teach more with less Less time and less money!

Global shortage of 18m teachers

India needs another 1,2m teachers America needs 2,3m teachers Sub-Saharan Africa needs a miracle

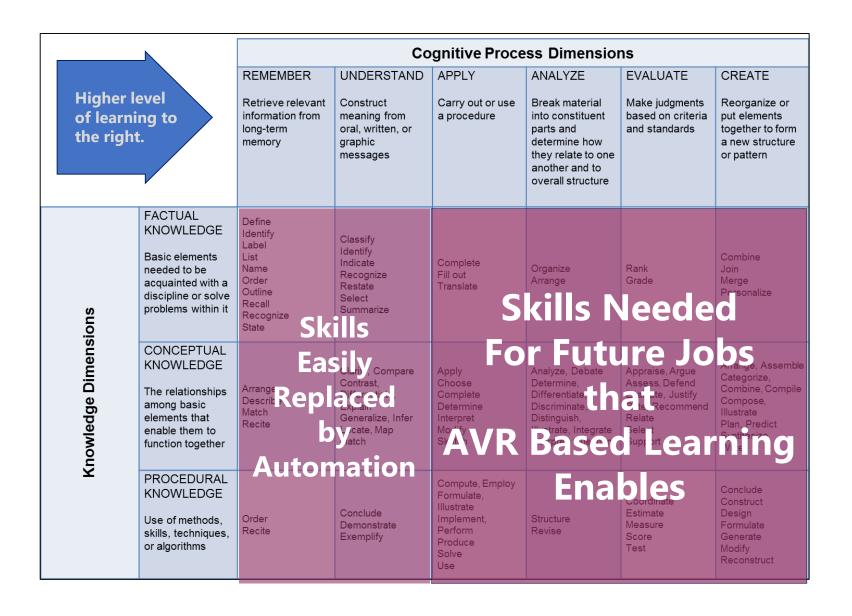
Need of learning solutions

We have to invent new learning solutions that address the increasing gap between the accelerating knowledge raise and the shrinking education budgets or we are as good as writing off this generation. In short we need to teach more with less; less time and less money to address the growing educational gap...

The Qualitive Education Problem

Traditional skills acquired through traditional education – namely memorization – is easily replaced by automation

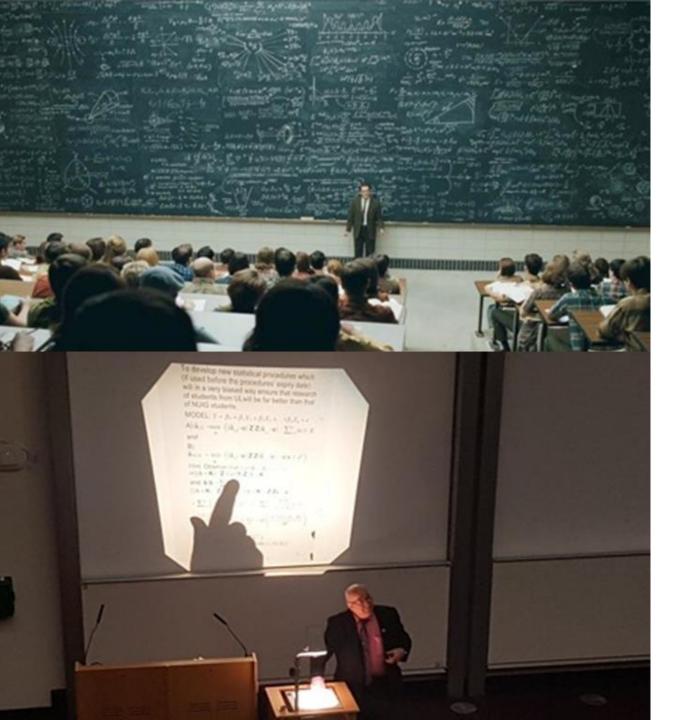
Future jobs require new skills such as Creativity, Problem solving, Critical Thinking, Curiosity, Collaboration, Communication, Grit, Imagination – that will enable future employees to conceptualize, create and collaborate.





Sage On A Stage

14th Century Teaching Method



Sage On A Stage

21st Century Teaching Method



What do you think are the characteristics of learners today? (Choose 3 options)

- A. Resilient
- B. Social learners
- C. Enjoys lectures
- D. Access content in school
- E. Multi-taskers
- F. Short-attention span



Old Methods Are No Longer Acceptable

"If we teach today's students as we taught yesterday's, we rob them of tomorrow."

John Dewey

Out with old school?

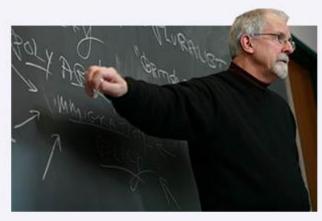
"Our education systems are derived from another age. Most of our education systems came into being in that structure in the 19th century, they modelled on the interests of the industrialists..."

Sir Ken Robinson July 8, 2010 at The Aspen Institute

Introduction Of New Technologies, But Is It True Disruption & Innovation?







BLACKBOARD



LECTURE MONOLOGUES

The Academic Solution

The Natural Way Of Learning Is In 3-dimension

- The real world is in **3-D**
- Our eyes and brains gives us a
 3-D picture of the world
- Traditional teaching is based largely on text and 2D images
- Abstract thinking required to turn that information to the real world structure/function and 3D images



1.3B Students Need Fast-knowledge

- Student Statistics
- Primary: 719,059,053
- Secondary: 568,019,151
- That's about 17% of the world population.



Why AVR leads to better retention

Situated Cognition: Learning is better when knowledge is **transferred within the context** with which it is applied in.

Immersion and Flow: Learning when exploration and mastery development can occur allows for maximum engagement and drives intrinsic motivation, which in turn leads to deeper learning

Pattern Recognition and learning in 3D: Mimics how people learn in real life; subconscious and conscious learning and in 3D, rather than 2D

Personalisation and Psychosocial moratorium:
Scenarios that react differently, just like in real life, matches level of mastery with the right scaffolding.
Also gives a safe space for learners to take risks where consequences are lowered

Learn Faster
Remember Longer
Decide Better



Learn

Train

Perform







CREATOR AVR

VIRTUAL TRAINER

AR ASSIST

Onboarding Familiarization Pre-training Sales Training

Procedure Practice Remote Training Virtual Certification AR Assisted MRO Remote Expert Assistance Real Time Data Display

Academic Adoption

EON Academic Customers & Partners

































































35% Increase in Test Scores

Students Remember Longer And Increase Test Scores 86% of Students in the VR Classroom improved their Test Results

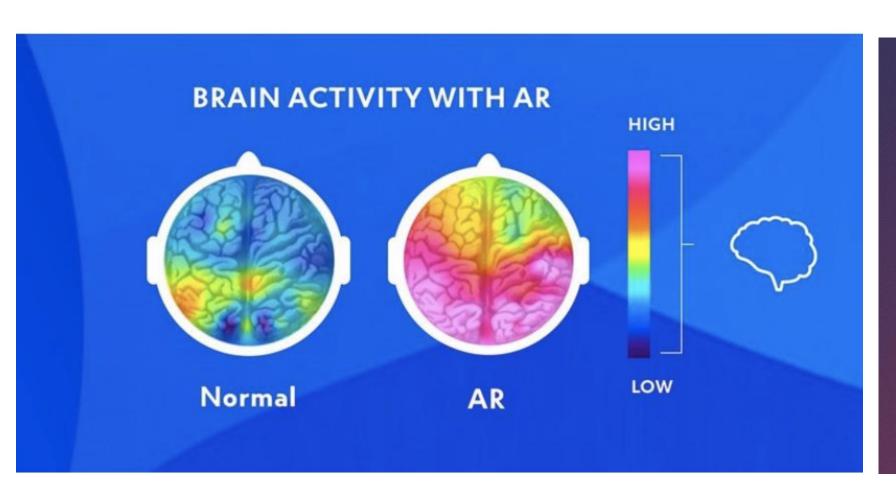
Attention levels doubled (92% vs 46%)
Test Scores increased with 35%

BBC Published study

"Students can see how things function. Instead of learning about the heart statically they can see it in a solid way, literally see blood passing through the valves, see exchange of oxygen, rotate it, tilt it and zoom in," Said Prof Bamford.



70% Increase in Memory Encoding



AR delivered almost double (1.9 times) the levels of visual attention compared to their non-AR equivalent.

What they found was that memory encoding was **70% higher** in the AR tasks compared to the non-AR tasks.



Learning In Virtual Reality: Effects On Performance, Emotion And Engagement

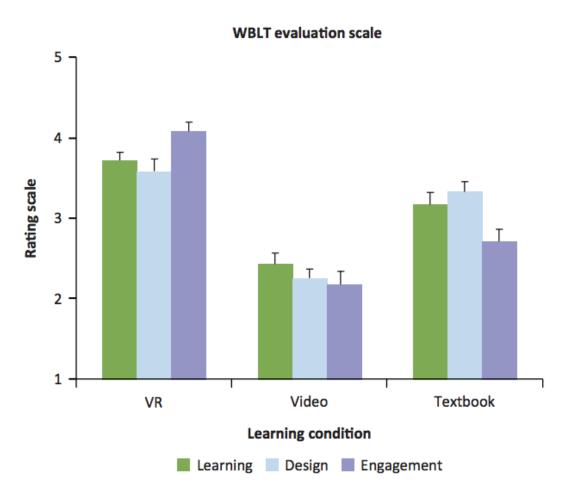


Figure 5. Mean WBLT ratings and SEM (error bars) for learning, design and engagement. WBLT, Web-based Learning Tools.

Allcoat, Devon & Von Muhlenen, Adrian. (2018).

"Post- test results showed that participants in the virtual lab condition outperformed participants in the traditional condition on conceptual understanding. ...

...Participants in the virtual lab condition also outperformed participants in the traditional condition with regard to procedural skills."

*Journal of Engineering Education, 2008
Bas Kollöffel and Ton de Jong University of
Twente*

"Conceptual understanding of electrical circuits in secondary vocational engineering education: Combining traditional instruction with inquiry learning in a virtual lab"

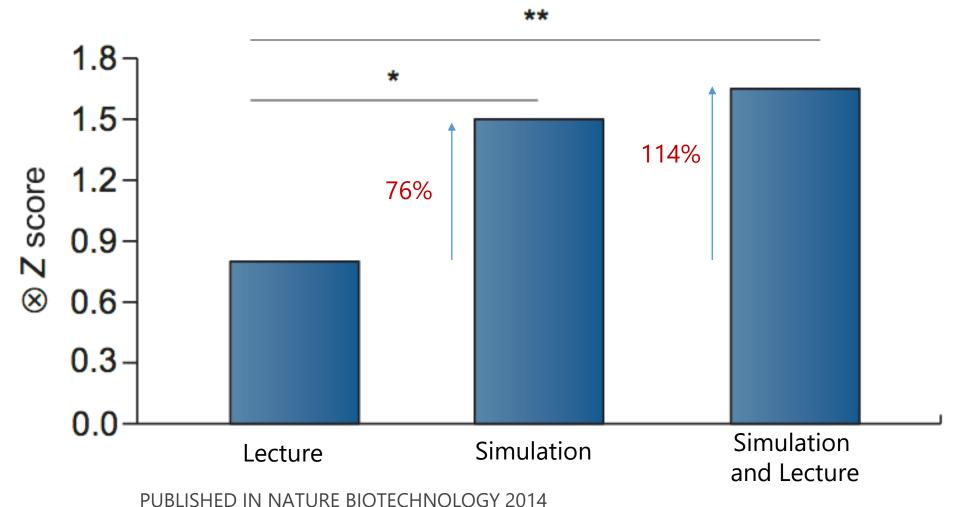
Journal Of Engineering Education

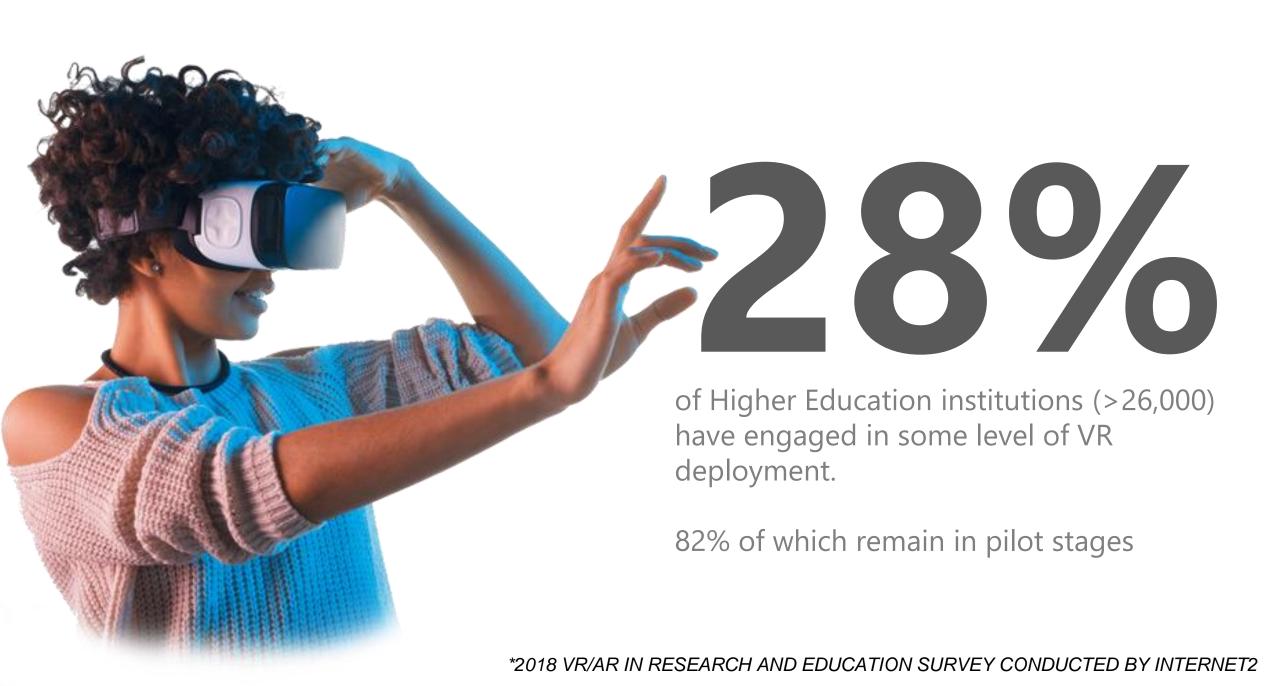
"Overall, well-designed combinations of virtual and physical experiments compared with either one alone allow students to gain a more nuanced understanding of scientific phenomena and a more robust understanding of inquiry."

Science, 2013 Ton de Jong, Marcia C. Linn, Zacharias C. Zacharia

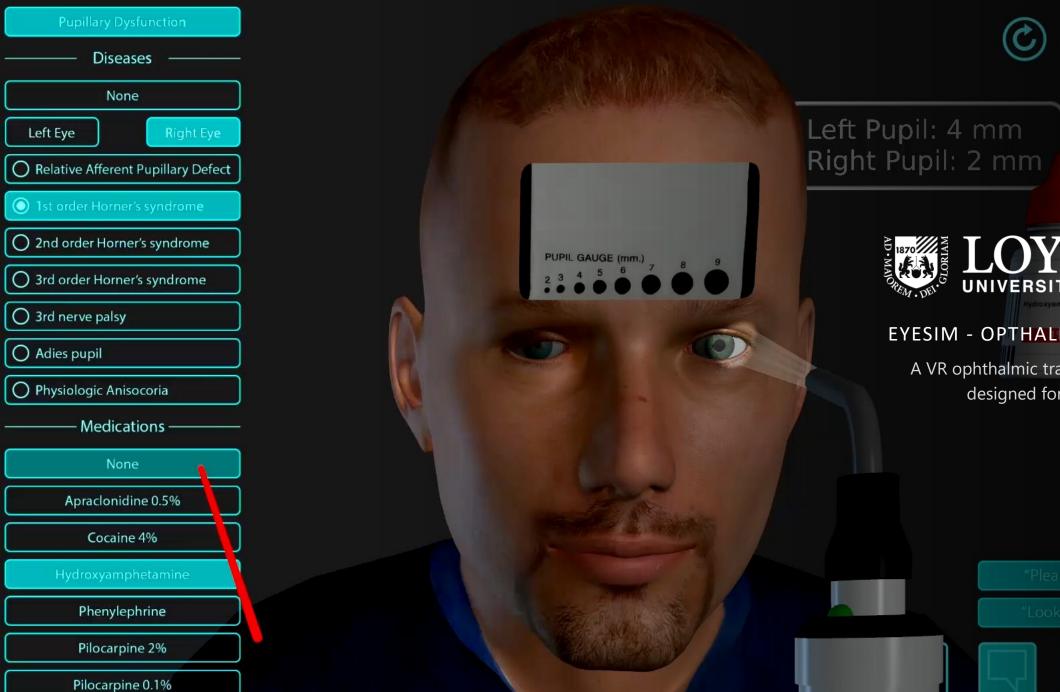
"Physical and Virtual Laboratories in Science and Engineering Education"

Improving Biotech Education Through Gamified Laboratory Simulations b





Academic Use Cases









EYESIM - OPTHALMOLOGY VR

A VR ophthalmic training simulator designed for the classroom.











Learning pupillary examination using the Advanced Pupil Simulator among medical students and residents

Sachin Kedar^{1,2}, Jideofor K Ndulue¹, Deepta Ghate¹,

¹Stanley M. Truhlsen Eye Institute; ²Department of Neurological Sciences, University of Nebraska Medical Center, Omaha, NE, United States.

Advanced Pupil Simulator ®



- We recently designed a virtual reality-based application, Advanced Pupil Simulator® (APS) in collaboration with EON Reality Inc. and A Nu Reality
- EyeSim APS is a virtual reality application that allows trainees to work in a simulated environment to identify and master pupillary examination
- The APS consists of a monitor (HP Zvr), 3D goggles and a stylus. The stylus replicates
 the experience of holding a handheld light used in eye exams. The goggles gives a 3dimensional representation of the image on the monitor and helps the image track the
 eye movement of the user.
- The APS has an interactive interface that simulates how medications and lighting affects
 the pupil. Eight pupillary conditions (normal, relative afferent pupillary defect (RAPD),
 Horner's, 3rd nerve palsy, Adie's pupil and physiologic anisocoria) can be simulated and
 confirmed using appropriate pharmacologic eye drops.

Methods

- 145 trainees (126 first-year medical students, 15 neurology and 4 ophthalmology residents) participated. All trainees reviewed an online power-point module, received a 15 minute demonstration and practiced pupillary examination in groups of 3 assigned to an expert faculty on the APS for 30 minutes.
- All trainees completed a Likert-type questionnaire (1 = not confident, 5 = very confident)
 before and after the session to assess confidence in performing pupillary examination.
- All trainees were objectively assessed for knowledge, comprehension, application and analysis using test mode on the APS..
- Statistical methods: Differences in pre-and post-training confidence was tested using

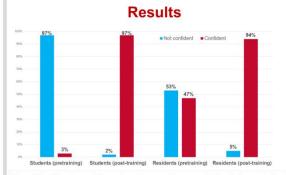


Figure 1. Participants confidence to perform pupillary examination before and after training with the Advanced Pupil simulator.

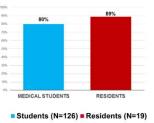


Figure 2. Proportion of participants who correctly demonstrated all steps of pupillary examination after training with the Advanced Pupil Simulator

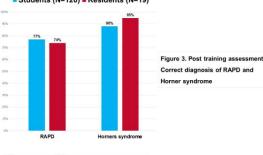


Figure 4. Post training assessment:
pharmacological confirmation of
Horner's syndrome



- 97% (122) students and 10 (52%) residents reported improved confidence in performing pupil examination after training with APS.
- 80% (101) students and 89% (17) residents were able to correctly list and demonstrate all steps in pupillary examination.
- 77% (97) students and 74% (14) residents correctly identified RAPD while 88% (111) students and 95% (18) residents correctly identified Horner's syndrome.
- Post training, students reported improved confidence in identification of all pupillary abnormalities (p=0.00), while residents reported improved confidence in diagnosing Adie pupil (p=0.00) and using pharmacologic agent to confirm anisocoria (p=0.00).

Conclusion

- Virtual-reality based practical training can shorten time to competency for critical medical examination techniques
- All trainees showed improved confidence in pupillary examination after using the APS.

Grant support



Results

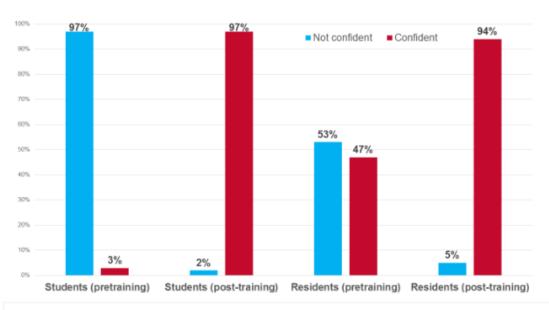


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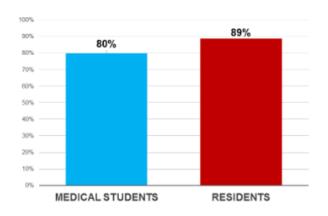
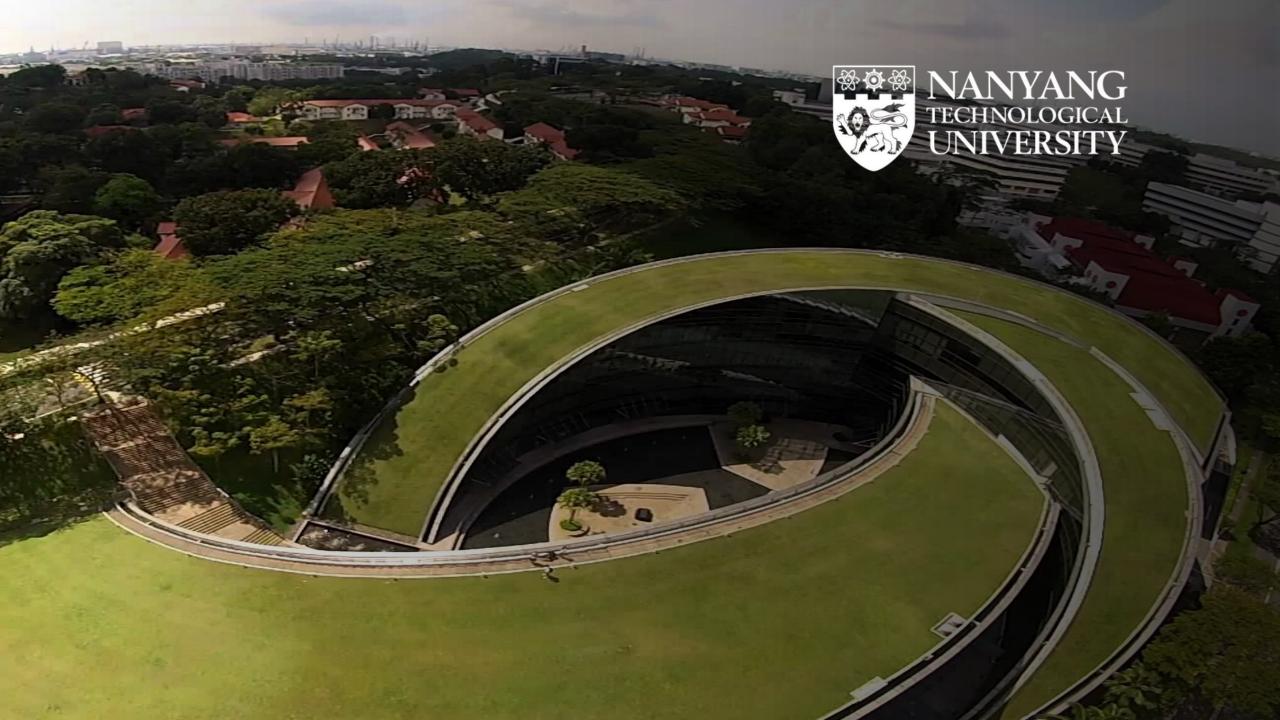


Figure 2. Proportion of participants who correctly demonstrated all steps of pupillary examination after training with the Advanced Pupil Simulator

Students (N=126) ■ Residents (N=19)







AVR For Education

In 2015 NTU launched a 5 year, **\$75 million** project in TEL (Technology Enhanced Learning) to further enhance its strength in the face of global competition. Read more here.

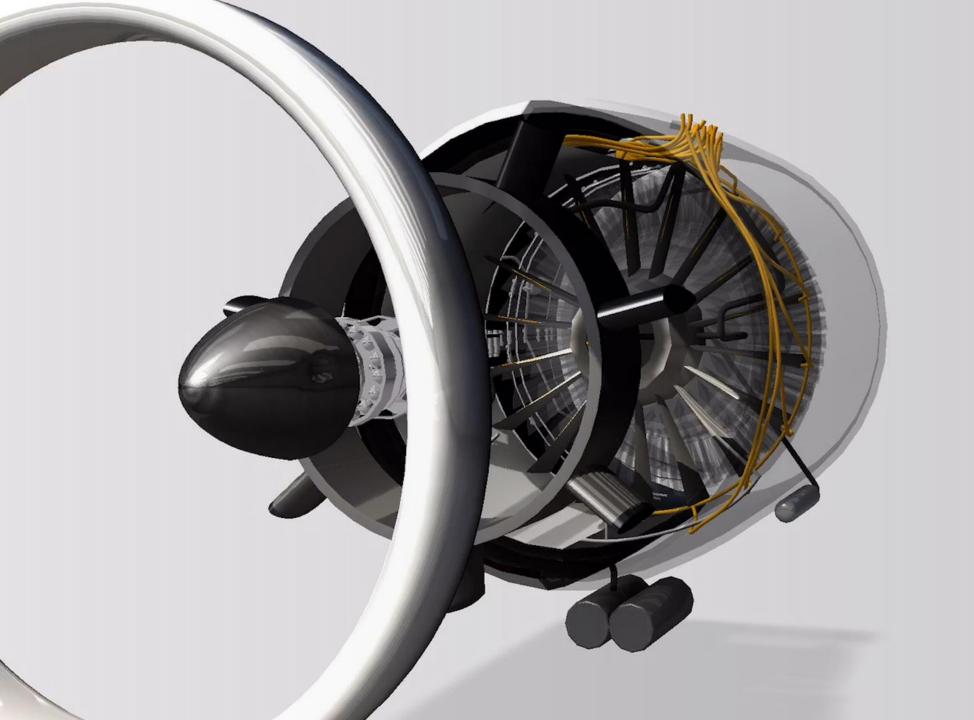
In 2017 EON Reality was selected to provide the needed *AR/VR infrastructure* – including a scalable software platform, a wide range of AR/VR systems and more.

The use of AR and VR in education enables a "flipped classroom solution for millennial generation:

- On campus, Virtual Labs for Engineering, Physics, Social Sciences and more
- Off campus, students experiencing AVR contents on their own devices

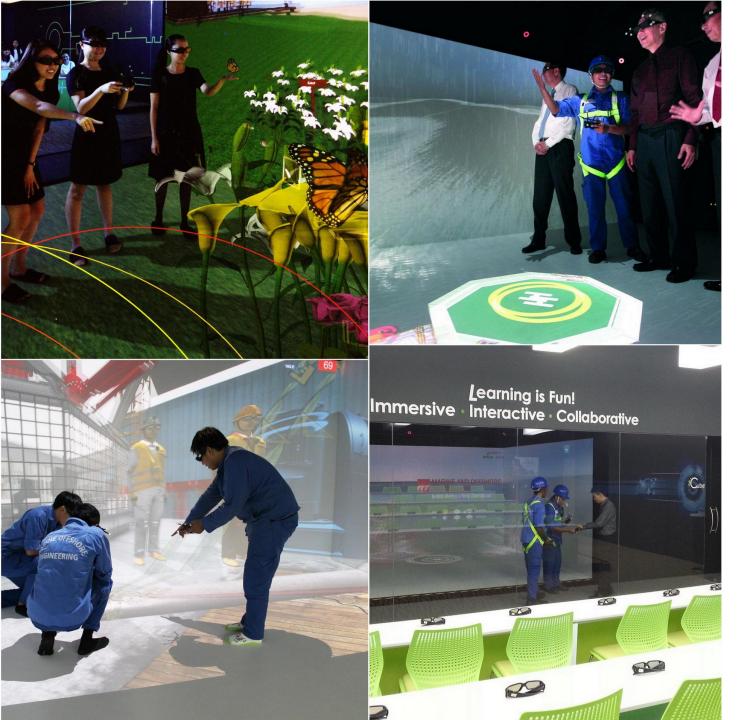














Institute Of Technical Education

ITE, Institute of Technical Education, educates and trains over **25,000 students** each year.

ITE is using EON Reality's technology platform for delivery of education and training in courses within:

- Marine and Offshore
- Aerospace Technology
- Space Design
- Facility Management
- Hospitality
- and more.

eCampus - Public Education in Province of Ontario

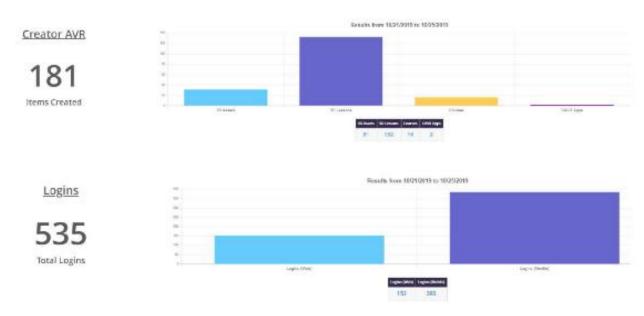
31 Higher Education Institution implementation, testing and delivery of the AVR Platform.

- Training Certification Level 1
- 1,400 Licenses deployed
- · Large student pool in Ontario public higher education

Once Pilot is complete, EON has the opportunity to secure somewhere between 100,000 to 300,000 users annually



Post Workshop Data:







Incorporating cARdiac ECG into the teaching on ECG helped me to learn this material in a new way



cARdiac ECG contributed to my understanding in a way that would not have been possible by attending a lecture or reading a textbook



I would like similar applications to be implemented into other topics/ teaching



cARdiac ECG was easy to use and understand



I found the cARdiac ECG app motivated me to learn more about the ECG



I would like to use cARdiac ECG again

Advancing AVR Education & R&D

Eon Reality Education

ACADEMIC EXPERTS DRIVE INNOVATION IN EDUCATION

EON Reality Education is a non-profit focused on advancing the cause of Augmented and Virtual Reality (AVR) education and research.





Led By Professor Bertil Andersson

Who **reformed teaching** through introduction of **educational technology** and **collaboration with Eon Reality** at Nanyang Technological University

- 2007 -2011 PROVOST
- 2011-2017 PRESIDENT



Eon Reality Education Advisory Board Members



Bertil Andersson Chairman Former President of NTU



Ihron Rensburg
Vice Chairman
Former President of University
of Johannesburg



Jenny Higham
Principal of St
George's University of
London



Montserrat Gomendio
Deputy Director of the
Directorate for
Education and Skills,
OECD



Jose Ignacio Wert
Former Minister
of Education,
Culture and
Sports, Spain



Jan Carlstedt Senior Advisor – Medicine, NTU



Peter Looker
Head of
Learning,
Teaching &
Pedagogy, NTU

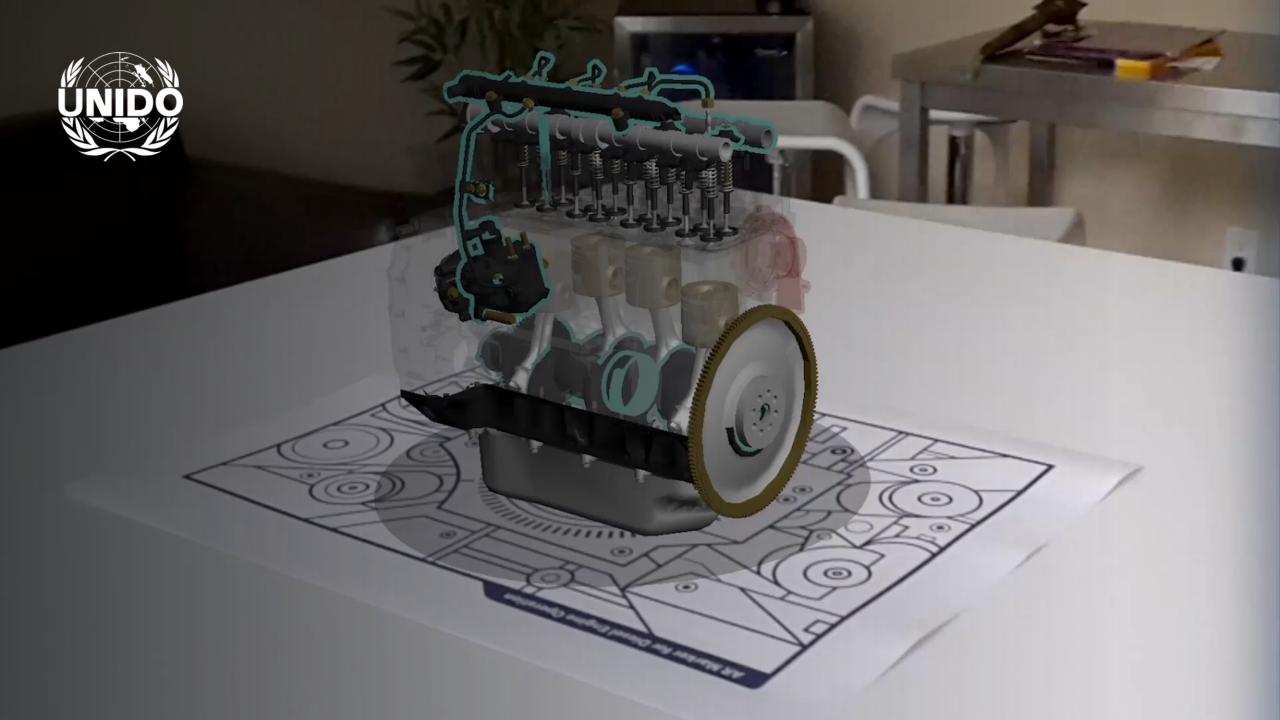


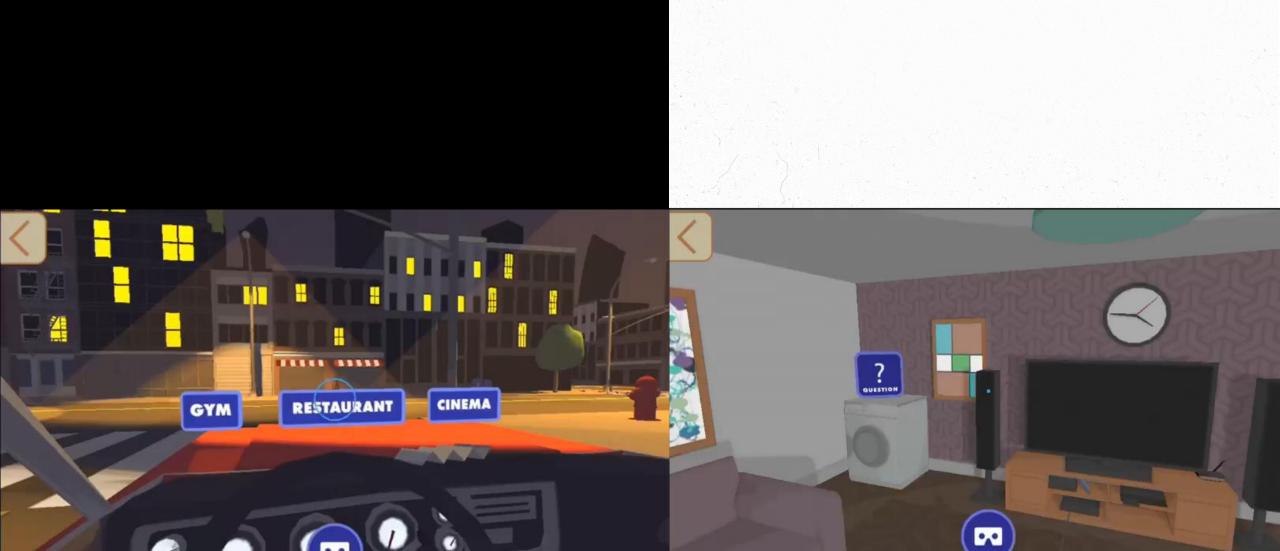
Chee Yeow Meng Interim Dean, College of Science, NTU



José Escamilla De Los Santos Education Innovation Director, Tecnológico de Monterrey







Research Grant Leverage

NTU EON CORPORATE LAB GRANT

NTU: Nanyang Technological University

After the successful investment from NTU in the IDC 2017, NTU invited EON in May 2017 to jointly develop anNTU EON CORPORATE LAB, modelled after existing NTU corporate labs

- NTU have anchored a grant based on the following components:
 - Focus on Security, Health and Safety
 - Partnership of 5 years
 - 90 people strong lab
 - National Research Foundation/NRF \$20M cash
 - NTU \$4M cash + \$6M in-kind

•\$30MUSD Singapore Government Grant

\$30M GRANT

Research grant Leverage - help securing grants through EON's industry partnership that provides leverage through inkind contribution and commercialization opportunities of the research outcome

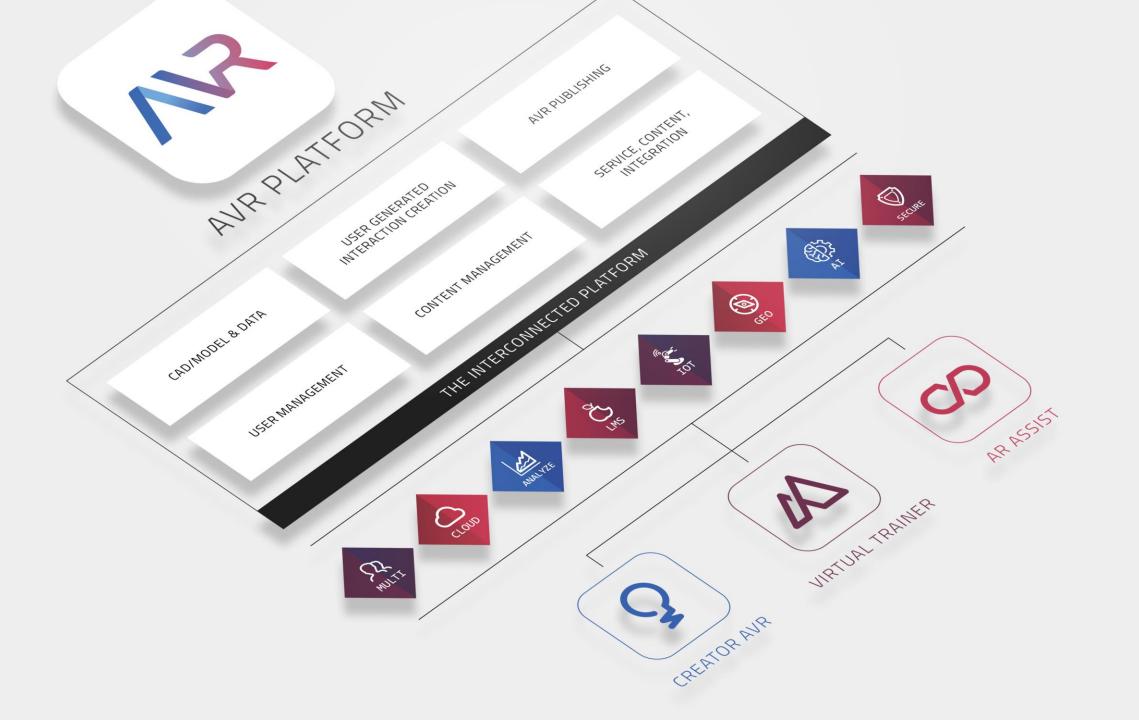
NATIONAL RESEARCH FOUNDATION
PRIME MINISTER'S OFFICE
SINGAPORE

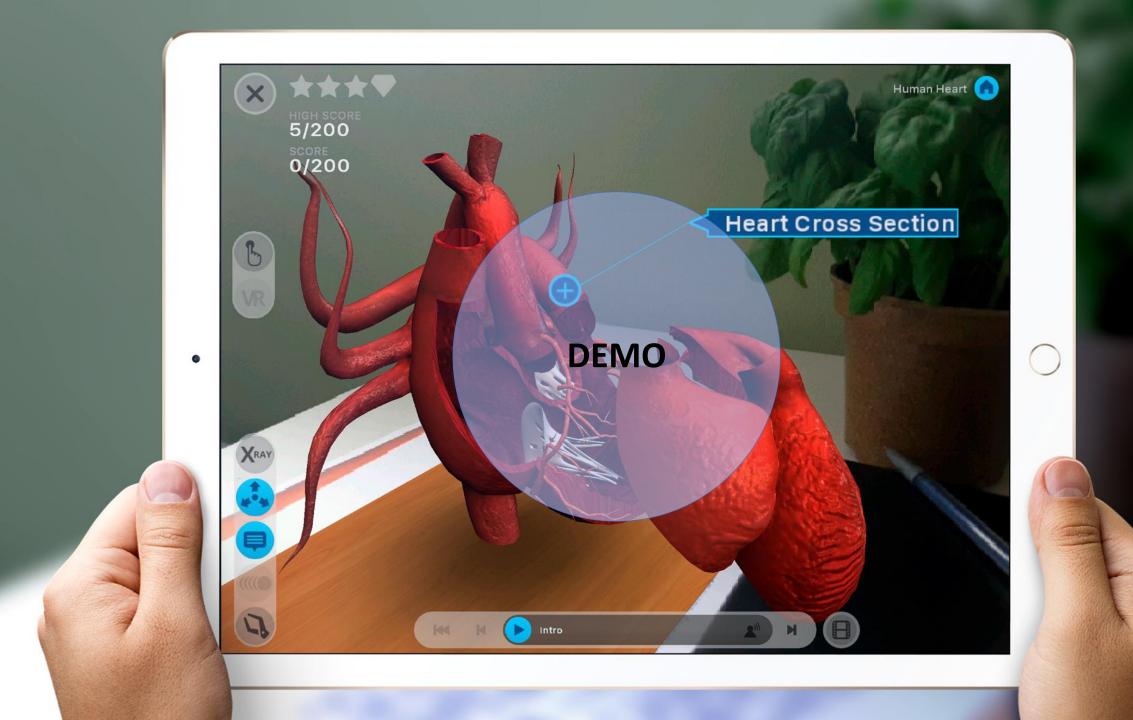
Research . Innovation . Enterprise



The EON AVR Platform







EASI Platform

Effortless

New Easy-To-Use User Experience On Desktop And Mobile

Affordable

- 870,000 New 3D Assets Integrated With The Platform,
- New AVR Application Vault

Self-Service

- New First Time User Experience,
- New 360 Content Creation,
- New CAD Cloud Conversion To AVR Portal

Interconnected

New Virtual Trainer Interconnected Product Features

Effortless

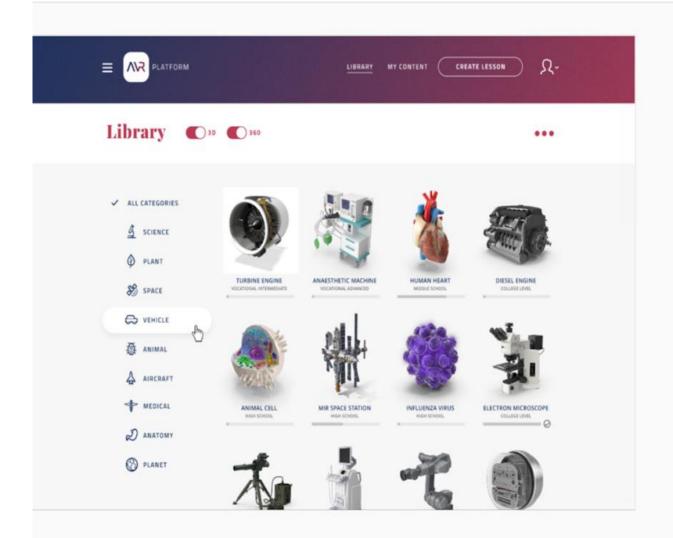
INTERACTION SIMPLIFIED

Pre-made lessons and 3D assets available for customization or immediate deployment

Intuitive, Easy-to-Use user interfaces makes lesson creation a breeze

Make lessons readily available outside the classroom anywhere and anytime

Capability to **create and refine individualized lessons** for different learners







Affordable

NO EXTRAVAGANT SET UP COSTS

No major investments in hardware required to get started

Lowered opportunity costs from time savings

Find an affordable package to suit your profile

EON can co invest in establishing an AVR enabled Center in your institution (conditions apply)

a3a277-580c-4156-438f-aa0852a665c0-2092/screen/7b73064a-0aad-4b62-98a7-7498db8cc000/Education-Plans

5







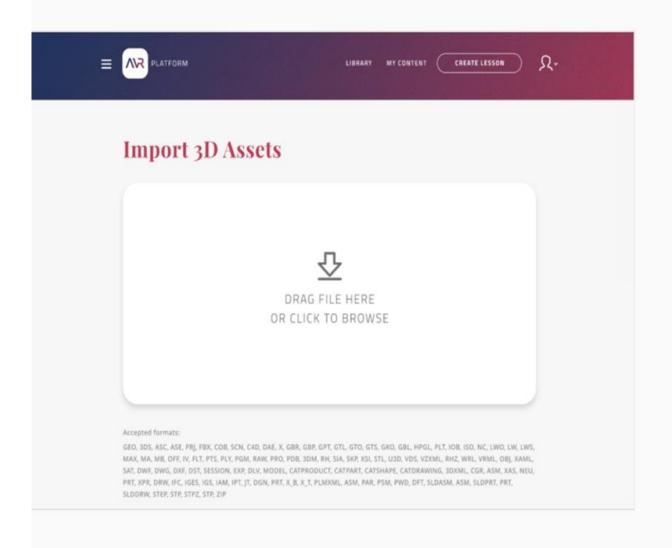
Self-service

DO IT YOURSELF

Take your pick from more than 870,000 3D models and environments in 360° to create and refine your own lessons

Linked to Google to make information retrieval and content population ready at a click

Can't find a 3D model? Upload your own in a wide range of formats supported by the EASI AVR platform









Interconnected

MULTI-MODAL LESSONS ACROSS ALL REALITIES

Find a presentation mode that best suits your teaching and learning objectives

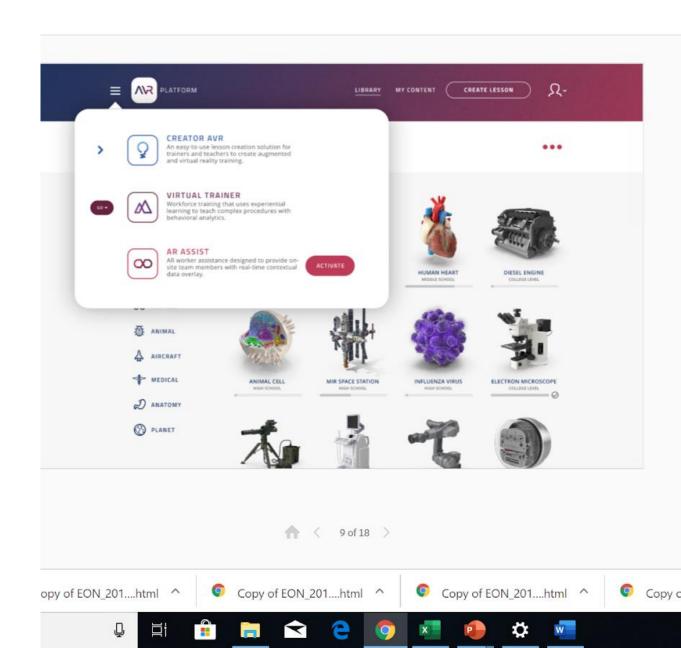
Immediately customizable lessons can be created in all modes of mixed reality using vast library of digital assets

CODE RED - UPDATED: Written S X

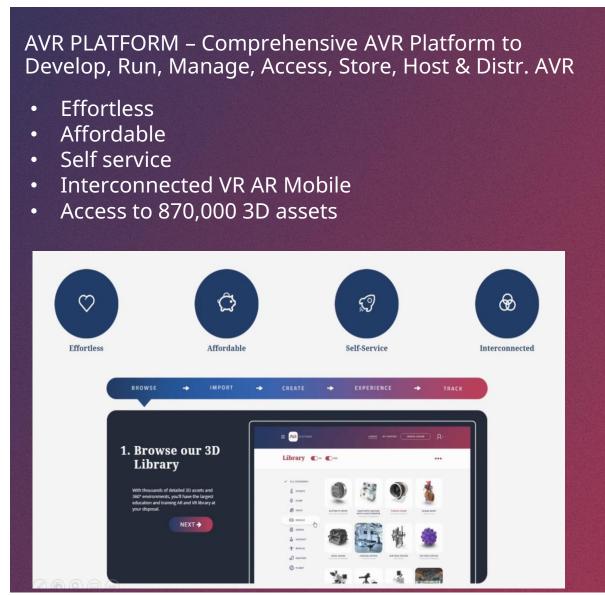
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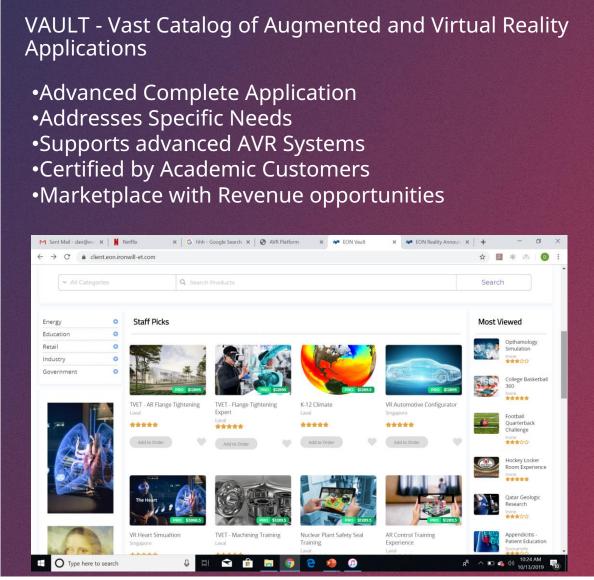
a3a277-580c-4156-438f-aa0852a665c0-2092/screen/c171b32b-b3ae-4a01-829d-deb9a8e159ec/Product-Menu





End To End Solution For AVR Knowledge Transfer





End To End Solution For AVR Knowledge Transfer

Vault

- Complete AVR applications that address specific needs and support advanced systems
- \$67MUSD worth of content

Marketplace

Partner Developed Applications

- Partners and customers developed applications for the AVR platform - uploaded on the Marketplace and secure passive revenue
- OR outsourced applications to EON partners for example Moldova or India
- OR use VR Academy resources in centers

AVR Platform

- Effortless
- Affordable
- Self service
- Interconnected
- 870,000 assets

Top Down Bottom Up Approach

AVR Platform Vs. Project Approach

THE AVR PLATFORM IS COST-EFFICIENT, FASTER AND BETTER

PROJECT APROACH

Need to build the AVR functionality for knowledge transfer from scratch, requires skilled coders, time & significant investment



AVR PLATFORM

Uses existing Build-in functionality, does not require skilled coders, nor significant time & investment. In addition service & integration costs are included.



Cloud Based, Cad/Model & Data, User Generated Interaction Creation, AVR Publishing, Content Management, User Management, Multi-User, Multi-Platform, Integrated Communication, Guidance And Assessment, Knowledge Markers, Real-Time Remote Guidance and service, content, integration

GAME ENGINES







>60% MORE COST FEFICIENT

- Less upfront investment with the AVR Platform as:
- The key required AVR functionality is already developed & included
- \$25K of service, content & integration is already included
- No need to use programmers to build the required functionality from scratch on top of Game Engines
- Typically cost savings are in the range 60% to 80% for pilots and more for implementations

> 70% FASTER

- Less Time required for implementation as:
- AVR platform can deliver the required functionality upfront
- We have seen an average reduction in time > 70% up to several hundred percent depending on the scope of the implementation

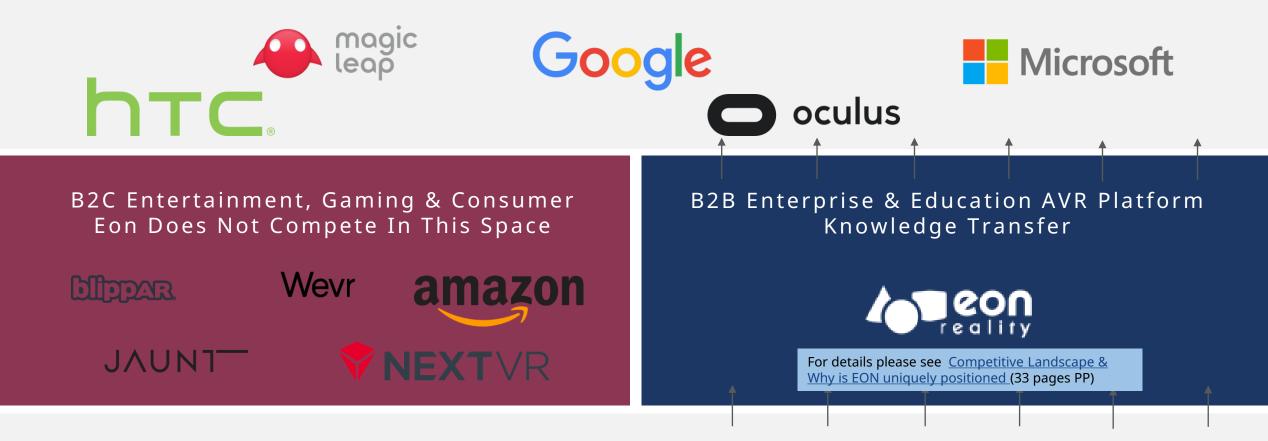
BETTER

- Scalable & interconnected platform from pilot to corporate wide deployment
- Existing knowledge transfer products for learning, training and performing
- Built-in Features needed for a vast majority of use cases.
- Architecture allows for reuse of assets between AVR products
- Data integration and sharing between AVR platform and legacy systems
- Robust backend capabilities that use AVR platform products as a front end

AVR Landscape

AVR Landscape

Hardware Platform Providers - Eon Partners Not Competitors Eon's AVR Platform Agnostically Publishes To These Hardware Devices



Game Engines - Eon Partners Not Competitors Eon's Avr Platform Can Agnostically Integrate With These Engines







Academic Packages



100 STUDENTS 3 YEAR CREATOR AVR LICENSE ACCESS TO FREE AVR LIBRARY CREATE 10 CERTIFIED LESSONS PER YEAR



cLASSROOM 3.0

\$50,000

\$5,000 FREE CREDIT FOR THE VAULT \$500 WORTH OF PREMIUM 3D CONTENT, FOR FREE

3 YEAR CREATOR AVR LICENSE

100 STUDENTS

100 HOMIDO MINI VR HEADSETS

100 AR MARKERS

1 SAMSUNG 360° CAMERA AND TRIPOD

COMPREHENSIVE NEEDS ASSESSMENT ANALYSIS

ACCESS TO FREE AVR LIBRARY

IMMERSIVE LEARNING AND TEACHING GUIDE

ONLINE SELF-SERVICE CONTENT CREATION PORTAL

ADMIN & USER MANAGEMENT PORTAL

CONTENT HOSTING

TRAINING (LEVEL 1)

TEACHER TRAINING AND SUPPORT)





CLASSROOM 3.0



250 STUDENTS 3 YEAR COMPLETE AVR PLATFORM LICENSE ACCESS TO FREE AVR LIBRARY \$2,000 CREDIT FOR PREMIUM LIBRARY CREATE 40 CERTIFIED LESSONS PER YEAR

\$250,000

\$25,000 FREE CREDIT FOR THE VAULT \$2,000 WORTH OF PREMIUM 3D CONTENT, FOR FREE

EXTENDED 3 YEAR COMPLETE AVR PLATFORM LICENSE

250 STUDENTS

250 HOMIDO MINI VR HEADSETS

250 AR MARKERS

FOUNDATION TEACHER TRAINING (LEVELS 1 AND 2)

- TEACHER TRAINING AND SUPPORT
- **LESSON CREATION TRAINING**

AVR EXPERIENCE LAB INCLUDING

- **ICATCHER PANORAMA**
- **VR HEADSETS**
- AR GLASSES
- **TABLETS**



UNPARALLELED LEARNING EXPERIENCE





1200 STUDENTS
5 YEAR COMPLETE AVR PLATFORM LICENSE
\$50,000 CREDIT FOR PREMIUM LIBRARY
ACCESS TO FREE AVR LIBRARY
CREATE 200 CERTIFIED LESSONS PER YEAR

\$1,200,000

UNLIMITED ACCESS TO OUR VAULT \$50,000 WORTH OF PREMIUM 3D CONTENT, FOR FREE

ALL THE FEATURES FROM CLASSROOM 3.0 SCHOOL PACKAGE, PLUS:

EXTENDED 5 YEAR COMPLETE AVR PLATFORM LICENSE

1,200 STUDENTS = 1,200 HOMIDO VR KITS 1,200 AR MARKERS

FULL TEACHER TRAINING (LEVELS 1 TO 2)

- TEACHER TRAINING AND SUPPORT
- CUSTOM LESSON CREATION + TRAINING

ULTIMATE AVR EXPERIENCE LAB INCLUDING

- EVERYTHING FROM SCHOOL PACKAGE, PLUS
 - IDOME MOBILE
 - HOLOGRAPHIC I

Campus

BE THE BEST IN CLASS WITH CAMPUS READY, FUTURE PROOF SOLUTIONS



AVR INDUSTRY



1200 TRAINEES
5 YEAR COMPLETE AVR PLATFORM LICENSE
\$50,000 CREDIT FOR PREMIUM LIBRARY
ACCESS TO FREE AVR LIBRARY
CREATE 200 CERTIFIED LESSONS PER YEAR

\$1,200,000

UNLIMITED ACCESS TO OUR VAULT \$50,000 WORTH OF PREMIUM 3D CONTENT, FOR FREE

MAKE YOUR TRAINING CENTRE A REVENUE CENTRE,
NOT A COST CENTRE

EXTENDED 5 YEAR COMPLETE AVR PLATFORM LICENSE

1,200 TRAINEES = 1,200 HOMIDO VR KITS 1,200 AR MARKERS

FULL TRAINER COACHING AND CERTIFICATION (LEVELS 1 TO 2)

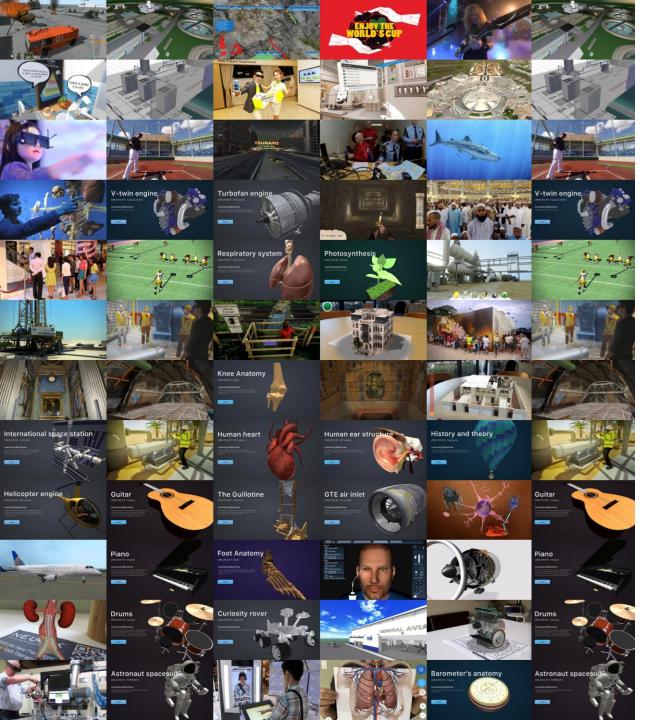
- TEACHER TRAINING AND SUPPORT
- CUSTOM LESSON CREATION + TRAINING

ULTIMATE AVR EXPERIENCE LAB INCLUDING

- UGE PHYSICAL IMMERSIVE SYSTEMS:
 - IDOME MOBILE
 - HOLOGRAPHIC I



A READY-MADE INDUSTRY 4.0 HUB FOR IMMERSIVE LEARNING ACROSS THE ENTERPRISE



Locally Developed Applications & Intellectual Property

- Locally developed IP consisting of AVR Applications, Lessons and Content developed by the Local Partners, local Academic institutions and local AVR companies due the AVR Platform's user generated content capabilities
- Monetarized as a part of the AVR platform and EON library
- Applications developed by the local network are sold internationally, local AVR partner will receive 70% of revenues, while the global partner that sells the products receives 30%.
- Part of AVR Growing Development IDC Community with outsourcing and other networking opportunities
- Academic R&D by encapsulating knowledge applications in area where academic partner excels and thus generating new intellectual property that can be commercialized globally



Regional And National Rollouts

- Stage I Establish the IDC, deliver 6,500 licenses including deliver 220 boxes, the equipment, etc., install and inaugurate within 4 months
- Stage II Needs assessment jointly develop and agree upon the needs assessment with the local partner within 6 months, Send the team of 2 VRIA teachers and specialists to conduct a needs assessment
- Select Target academic level, University technical vocational training or elementary school, They will review out existing library
- Select Regions teachers and students for the VR innovation Academy knowledge transfer activities For each of the 3 levels outlined Above Under the AVR knowledge transfer mechanism
- Stage III pilots in selected regions and academic institutions within 8 months
- Stage IV National rollouts adapted based on feedback from the pilots within 18 months
- A concrete Example is the national rollout in Singapore & the implementation plan for Morocco developed together with USAID

Key Academic Benefits

Benefits For Academic Institutions

- Accelerate AVR Campus wide and National Roll-outs helps people with knowledge transfer, learn faster, remember longer, make better decision, experiential learning
- Multi- Campus Collaboration & rollouts
- Challenge based and experiential AVR curriculum Vault with a vast catalog of AVR applications on 20 years of development helps to get a flying start
- Innovative Transform education for the 21st century with AVR Experiential learning based on AVR Platform
- It Works Hard Evidence that AVR works, see statistics
- R&D & IP partnership Commercialization opportunities for your existing IP
- Research grant Leverage help securing grants through EON's industry partnership that provides leverage through in-kind contribution and commercialization opportunities of the research outcome
- The AVR Marketplace provides you with opportunities to have passive income from your developed AVR applications
- **EON's global network** international collaboration in more than 70 countries that you can access
- Students Love AVR based Education Higher retention and engagement from students
- Scale AVR online Enables AVR Experiential Education Online
- Virtual labs Expand Lab equipment at lower Costs Virtually

