



DIGITIZATION IN HEALTHCARE: **AMPLIFYING VALUE FOR THE FUTURE**

AHMAD MOURAD | APRIL 21st 2021

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Some contents and views expressed are solely the opinions of the speaker and do not necessarily reflect the opinion or position of Johnson and Johnson, nor its respective parent or affiliate companies.



DISCLAIMER

Our PURPOSE

We blend , Science and Ingenuity to profoundly change the trajectory of health for humanity.



Pharmaceuticals



Consumer Health



Medical Devices



TOP 10

GLOBAL COMPANY IN
R&D & INNOVATION
INVESTMENT



”

Innovation at Johnson & Johnson is about creating strong networks of people who can combine resources, ideas and technologies in a new way...

A portrait of Paul Stoffels, M.D., a middle-aged man with short, graying hair, wearing black-rimmed glasses, a dark blue suit jacket, a white dress shirt, and a blue patterned tie. He is smiling slightly and looking directly at the camera. The background is a soft, out-of-focus outdoor setting.

Paul Stoffels, M.D.

Vice Chair of the Executive Committee
& Chief Scientific Officer | Johnson & Johnson

CROSS SECTORS COMPREHENSIVE GLOBAL TOOLBOX



INNOVATION CENTERS
Early-Stage Acceleration



JJDC
Strategic Investors



JLABS
Life Science Incubators



BUSINESS DEVELOPMENT
Late-Stage Deals

Innovation has changed the trajectory of Healthcare...

...but tremendous challenges remain



60% increase in life expectancy



Near normal life expectancy with HIV, treat with one pill, once-a-day



Targeted therapies and personalized solutions



Robotics and digital surgery

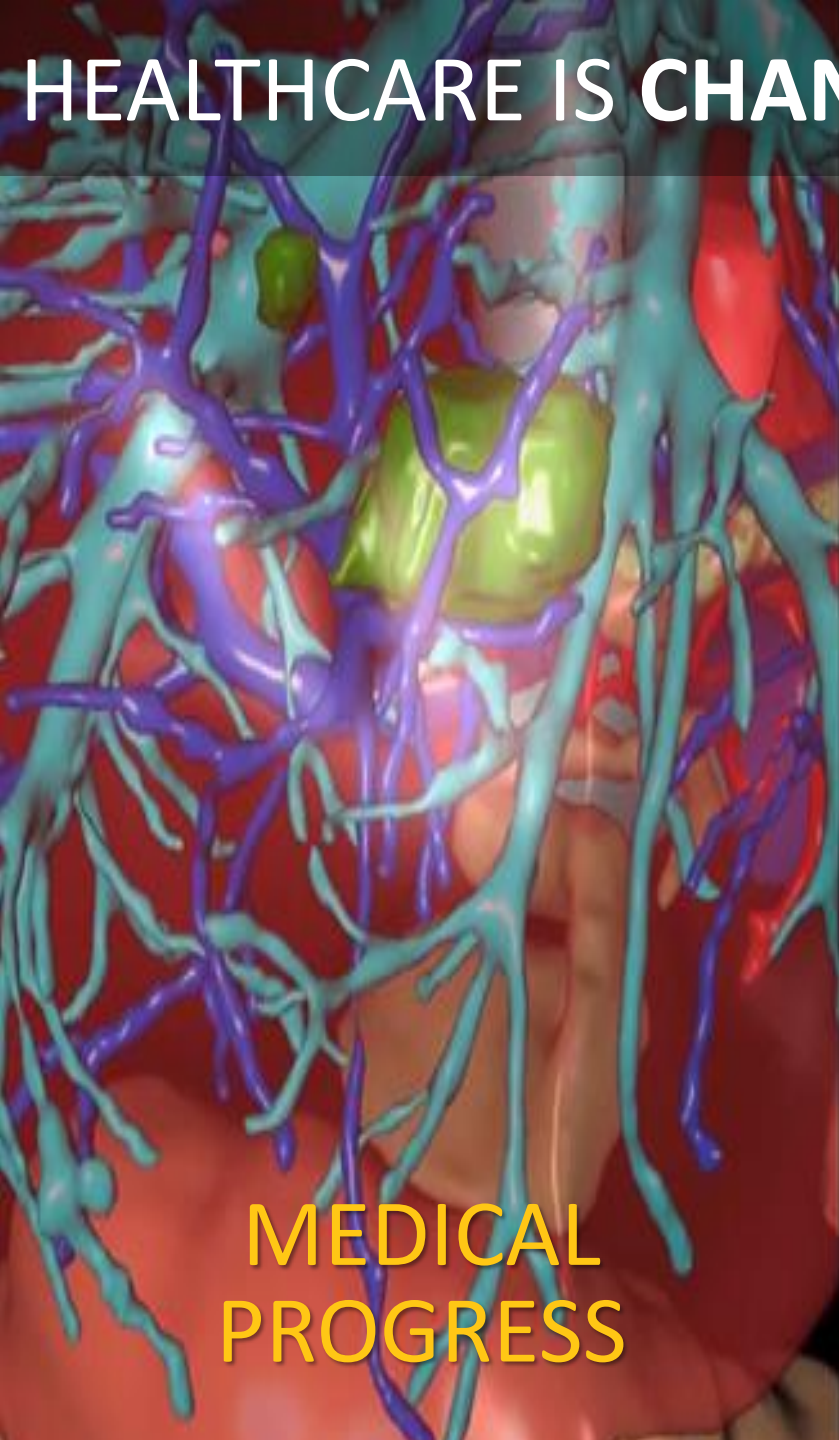


Long-acting treatments

Major healthcare challenges with significant global burden

Cancer	Heart Disease
HIV	Tuberculosis
Diabetes	Ebola & other pandemics
Alzheimer's Disease	Safe surgery
COVID-19	

HEALTHCARE IS CHANGED...



**MEDICAL
PROGRESS**

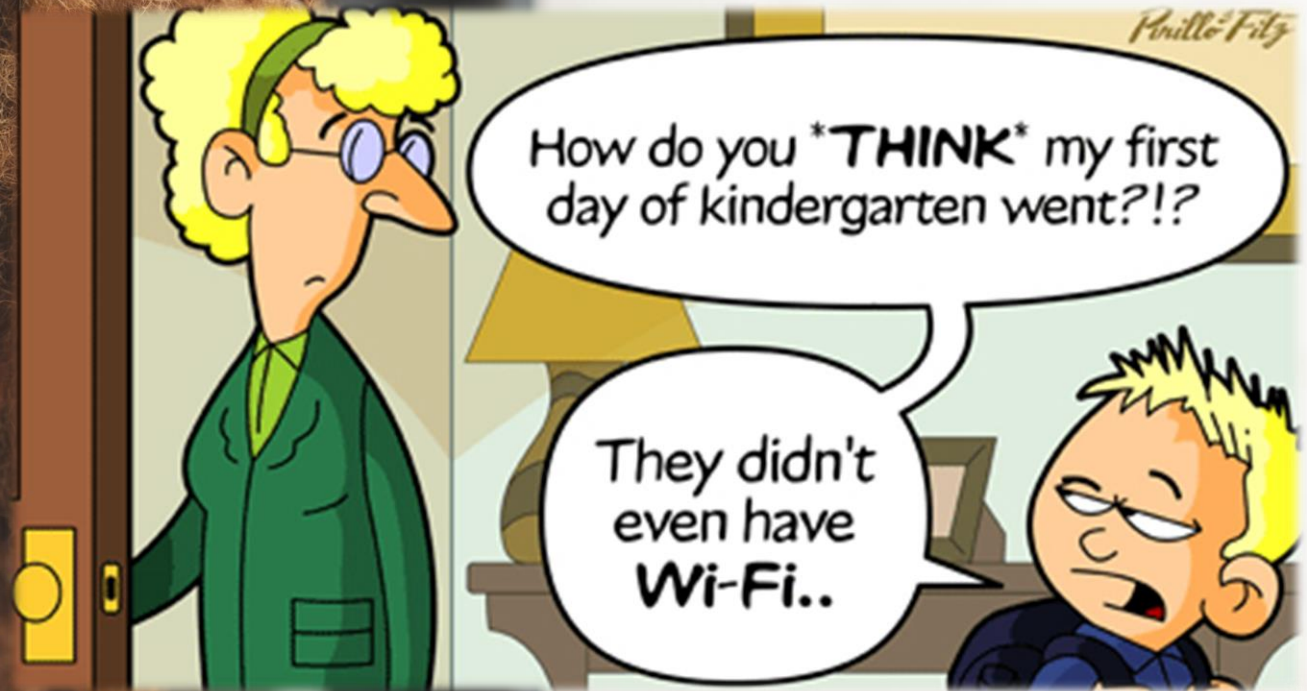


**INNOVATION &
TECHNOLOGY**



**PATIENTS
ENGAGEMENT**

DIGITAL NATIVES...



WE ARE CHANGED...



"Ok Google, remind me to take my medication"

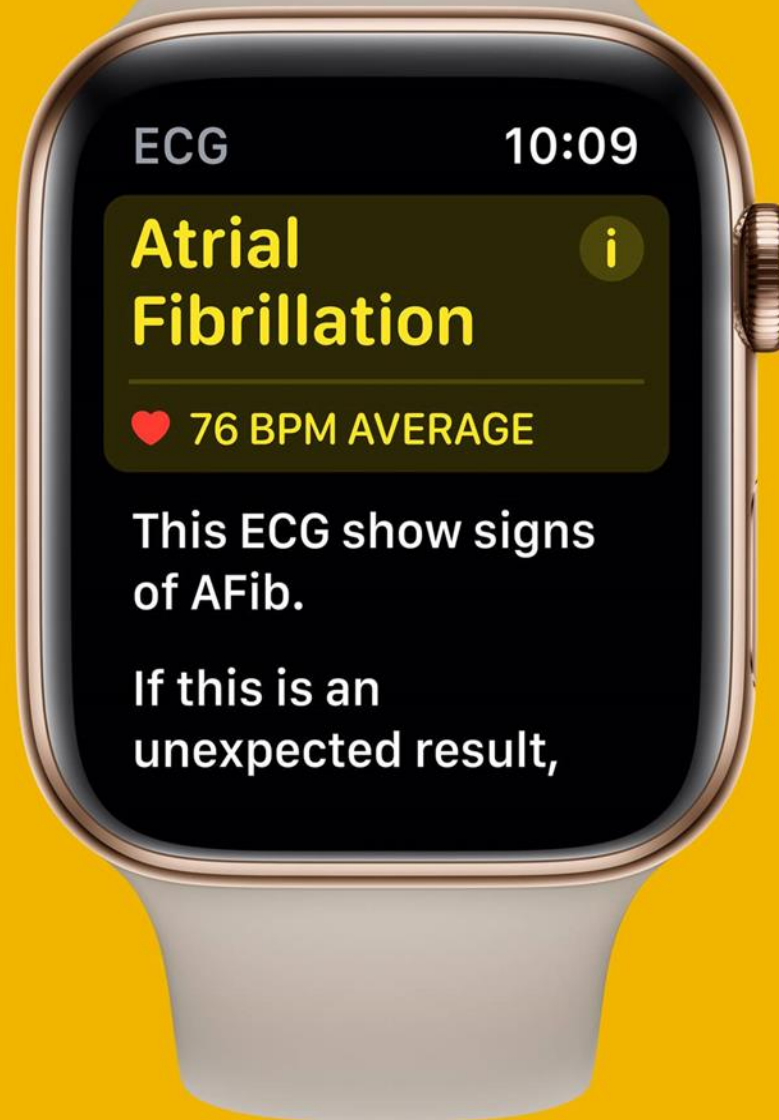


PHYSICAL BECOMES DIGITAL...

5G



REAL-TIME MONITORING... INTERNET OF THINGS (IOT)



30%

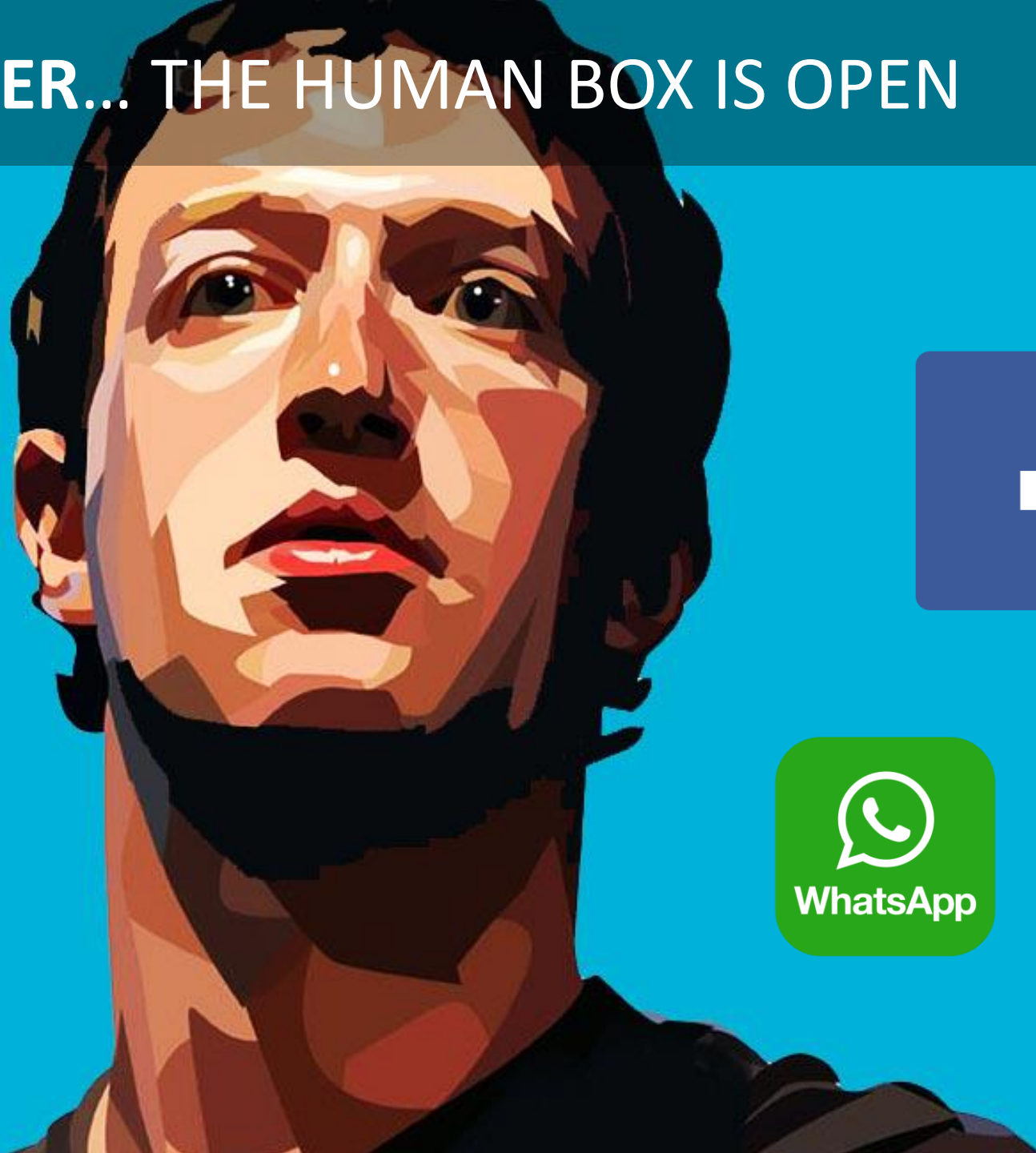
of AFib cases go undiagnosed until life threatening complications occur, critical need for more efficient and scalable screening...

WE KNOW YOU BETTER... THE HUMAN BOX IS OPEN

Google



amazon



THE BOOK IS READING YOU... THE HUMAN BOX IS OPEN

THE 21 INDISPUTABLE PRINCIPLES OF TRADING

AHMAD MOURAD

Reading this extraordinary book is truly a rewarding experience that gets you to critically reflect, think, and act differently on how to go about trading successfully, exponentially growing and sustaining your fortune, and adding value to the world around you. This book will surely unify the thinking, and instill straightforward strategies, and a roadmap to the investing and trading end goals investors are aiming to achieve.

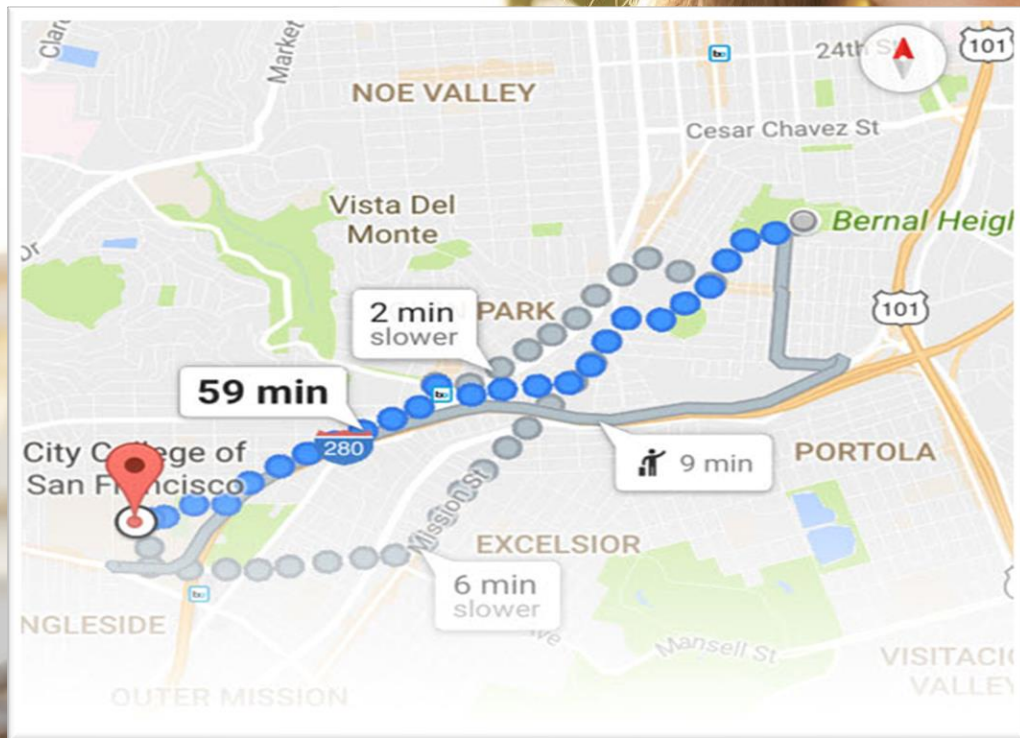
'The 21 Indisputable Principles of Trading' is all about the principles to successful investing and stocks trading, built on a solid foundation and profound experience that will withstand the test of time. It is based on evaluated experiences, practical experts' reflections, and proven financial results. And by exploring and leveraging these principles, investors can change and grow to control their destinies of successful investments, stocks trading, fortune, and ultimately quality of life.

As you start to uncover the principles and gems the author embedded in this book, you will immediately actualize your status as the captain of your own investing and trading journey, no longer helpless, puzzled, and solely reliant on claimed trading experts, and dubious external advisors that uncertainly command and chart the course for your investment journey and decisions.

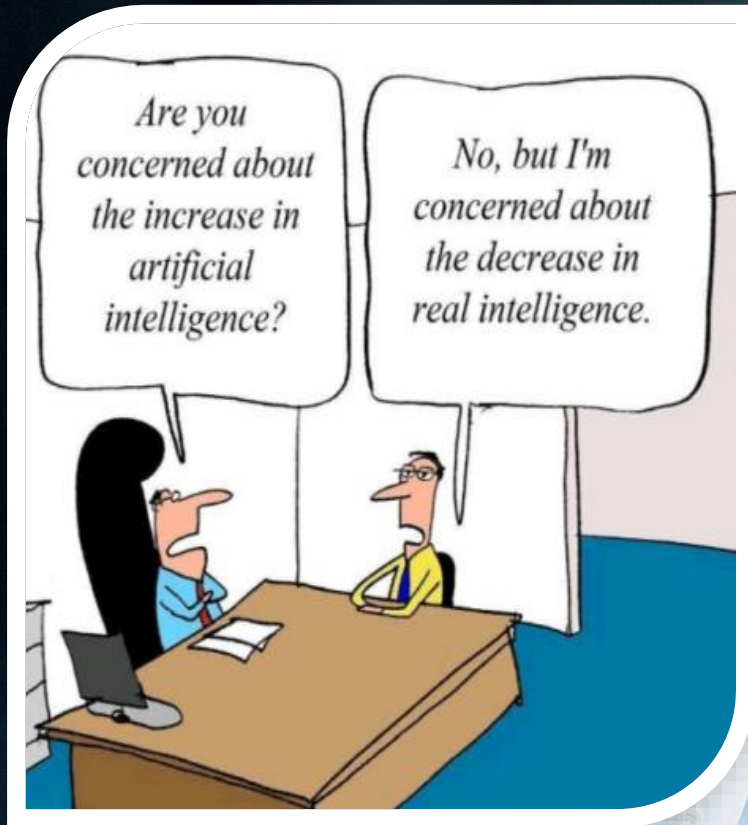
kindle



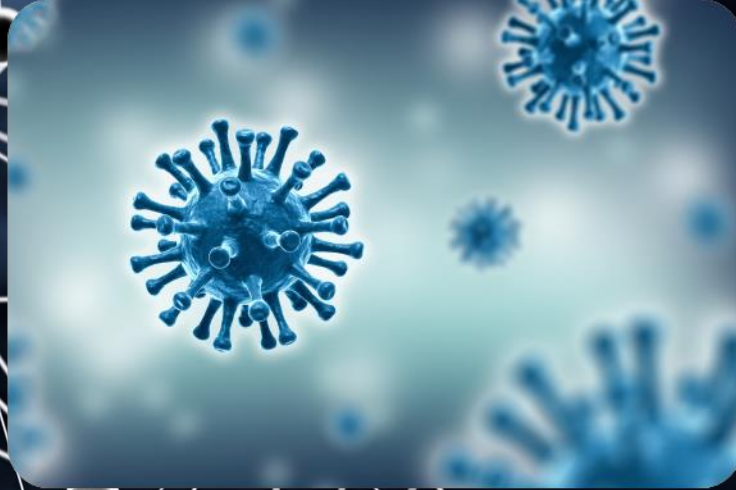
WE LEARNED TO TRUST DIGITAL & DATA...



MORE TRUST IS REQUIRED AROUND DIGITAL & DATA...



THE VALUE OF DATA... FOR ALL



DATA VALUE | SICK CARE TO PREVENTIVE CARE..



ASSETS vs VALUE...





DIGITAL SURGERY

Shape a future where medical intervention is smarter, less invasive, and more personalized...

*It is about an **end-to-end platform** that combines the most innovative minds, medical expertise, digital solutions, services and technologies of hardware, software and data...*



DIGITAL SURGERY | THE VALUE ECOSYSTEM...

Solutions & Services
Innovative Products, Services
and Solutions

Instrumentation
Best-In Class
Instrumentation

Connectivity
Connected Integrated Health
Interoperability
Privacy, Security

Visualization
Advanced Visualization

OR Workflows
Patients Pathways
Diagnostic Tools, E2E
Patients Pathways, Surgical Flows
Surgical Quality Improvements

OUTCOMES
AMPLIFYING
VALUE FOR ALL

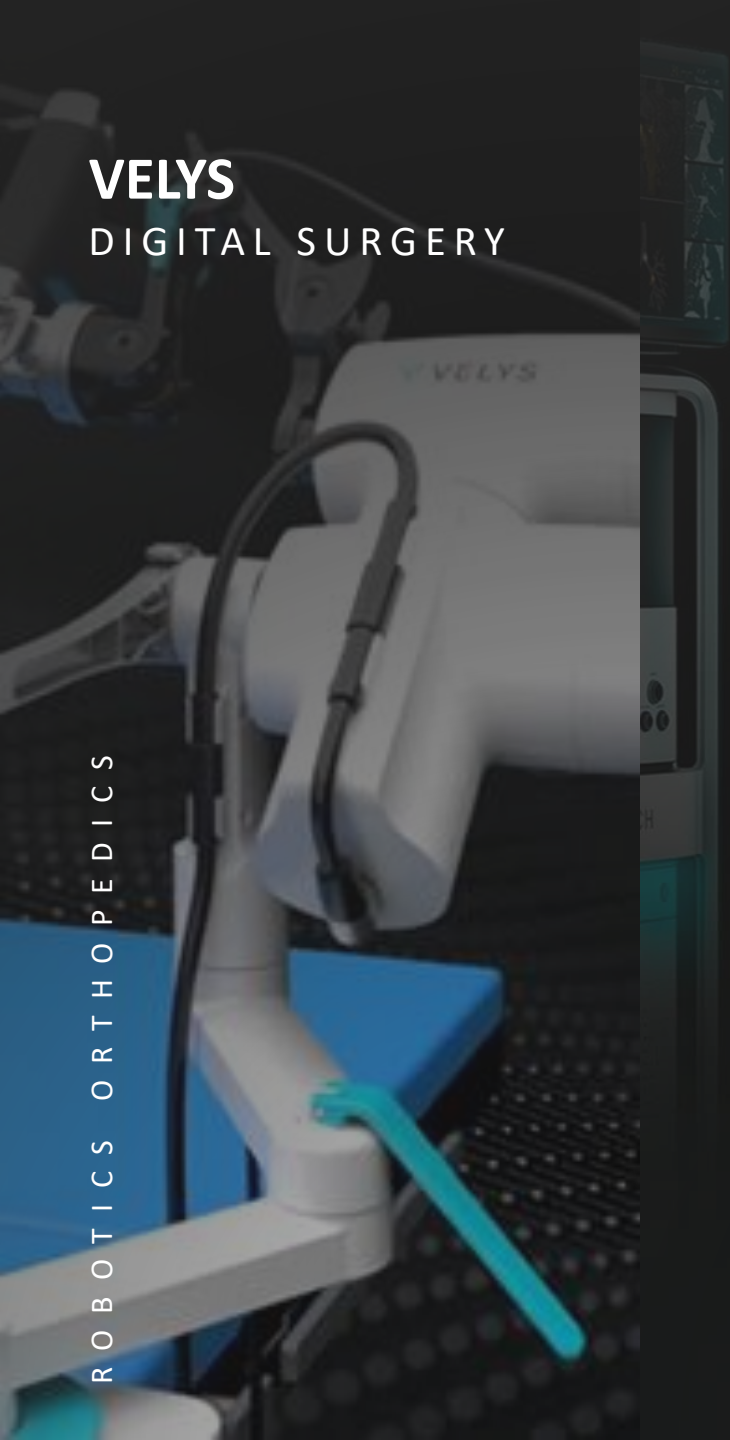
NextGen Robotics
Robotic Surgery
Digital Health Robots

Data Analytics
AI, Algorithms and ML
Personalized and Precision
Health



VELYS
DIGITAL SURGERY

ROBOTICS ORTHOPEDICS



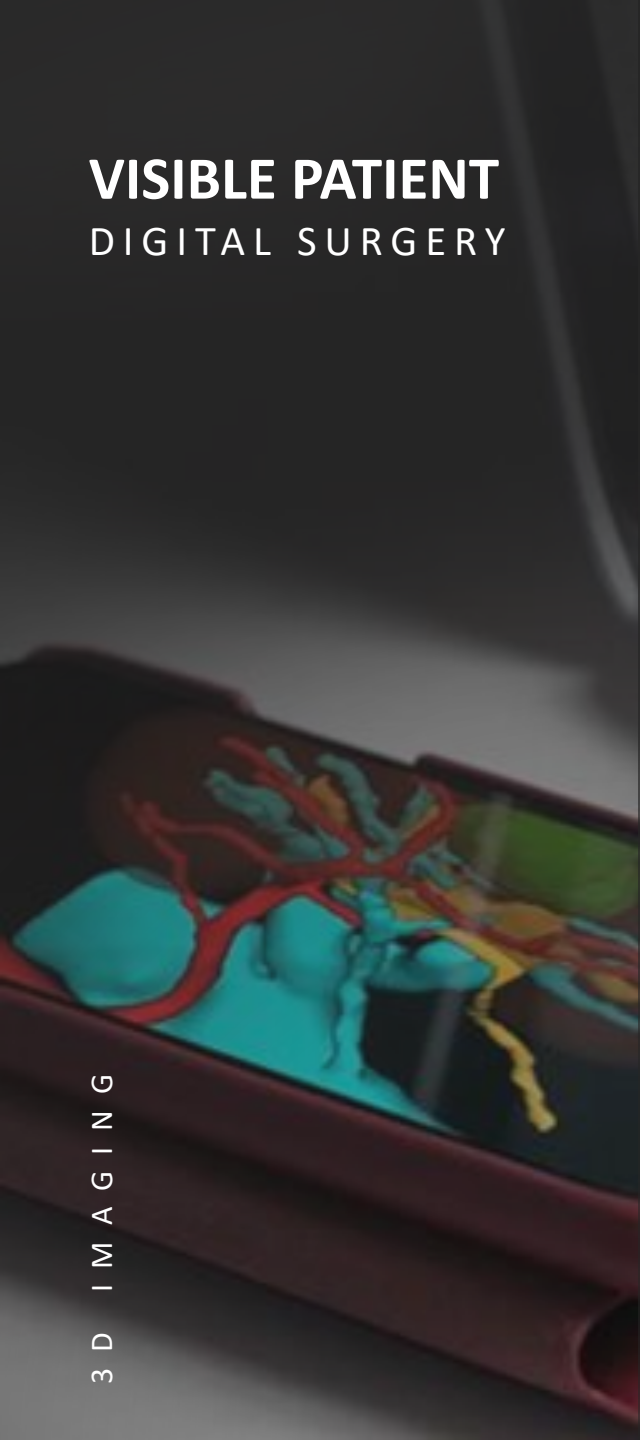
MONARCH
DIGITAL SURGERY

ROBOTICS LUNG CANCER



VISIBLE PATIENT
DIGITAL SURGERY

3D IMAGING

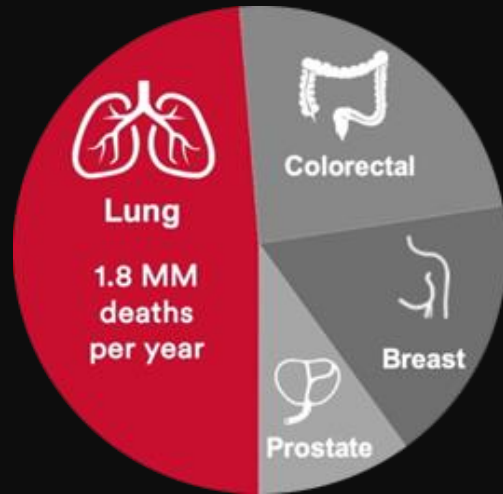


OTTAVA
DIGITAL SURGERY

NEXTGEN SURGICAL PLATFORM



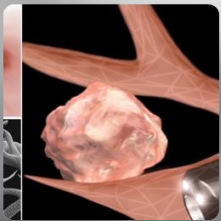
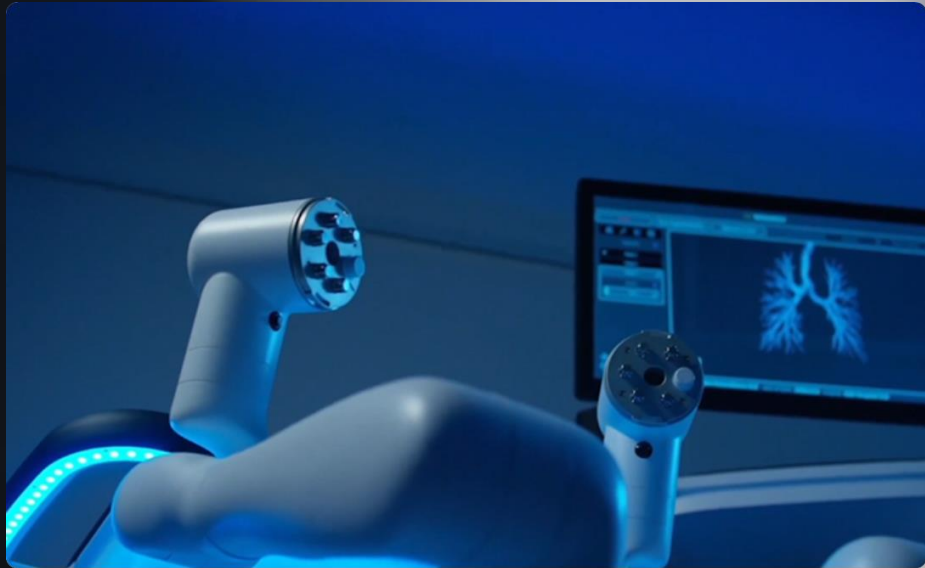
PRECISION CARE...



Lung Cancer
is the leading
cause of cancer
deaths globally...



PRECISION CARE...



REACH

VISION

CONTROL



BORDERLESS & COLLABORATIVE CARE...



Cancer Patient
Jordan



AI | 3D Imaging Center
Dubai



Cancer Specialized Clinical Trials Institute
Netherlands

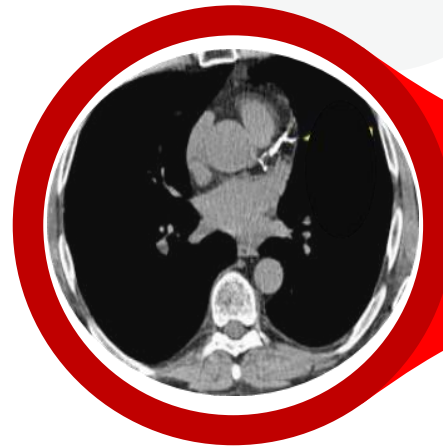
A CLEARER ROADMAP FOR SURGERY... AI | 3D



DIGITAL SURGERY | **VISIBLE PATIENT**

A CLEARER ROADMAP FOR SURGERY

Patient Images



Visible Patient

Artificial
Intelligence
3D Modeling

3D Digital Model



- CT-Scan or MRI images sent via secure online medium
- Qualified Radiological Technologists analyze and process images using advanced artificial intelligence platform
- 3D digital copy of the organ securely shared with physicians for patients' discussion, education, decision making, surgery planning and next steps

DIGITAL SURGERY | **VISIBLE PATIENT**

A CLEARER ROADMAP FOR SURGERY

Simulate removal of anatomy with
**Remaining organ volume
and blood supply**

3D reconstruction
in physicians iPhone, and the anatomy



**Better understand
spatial relationship**
between tumors and adjacent anatomy

Accurately identify
the location of tumors

VELYS™
Digital Surgery



DIGITAL SURGERY | VELYS

Pre-Operative, Intra-Operative, Post-Operative Surgeries Powered by Innovative Products, Services, Platforms Digital Solutions, AI, Machine Learning & Experiences of Thousands of Surgeons & Patients Generating Intelligence to Inform & Transform Future of Care...

**Personalize & Optimize
Patient Care**

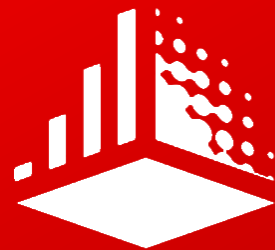


**Drive Consistency & Efficiency
Inside & Outside the OR**



**Enable Continuous
Surgeon Development**





C ▶ S A T S

EMPOWERING SURGEONS

A POWERFUL SURGICAL INSIGHTS PLATFORM
DESIGNED TO MAKE SURGERY SAFER

EMPOWERING SURGEONS...



Academy | TRENDING

32

Robotic Prostatectomy

SEAMS
22.5



Dr. Harley Holt

"The Monsen Maneuver was adequately performed, but should the Hartley Method have been..."

JOIN THE DISCUSSION



17m 24s

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Robotic Triple Neurectomy



Dr. William Scott



Robotic Incisional Hernia Repair



Academy Case



22.9



Robotic Roux-en-Y Gastric Bypass with sewn Gastrojejunal Anastomosis



Dr. Curtis Peery

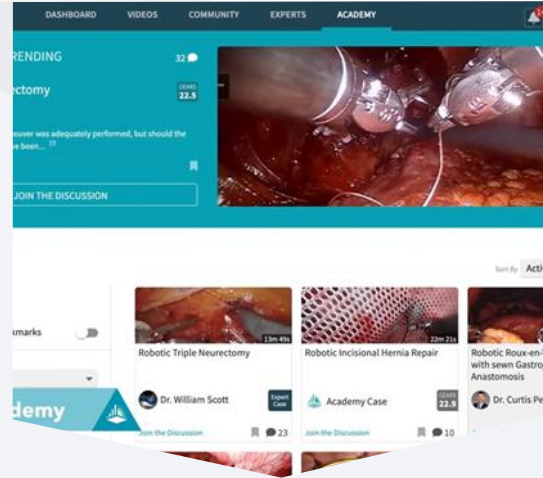


DIGITAL SURGERY | CSATS

A POWERFUL SURGICAL INSIGHTS PLATFORM DESIGNED TO MAKE SURGERY SAFER



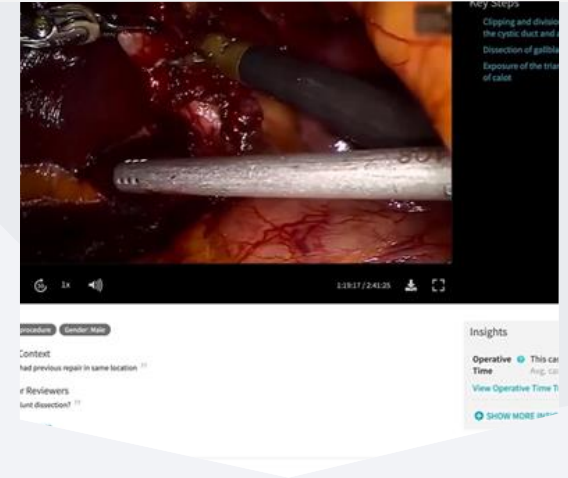
**Accelerate Surgeons
Learning Curve**



**Augment Surgeons
Knowledge**



**Feedback, Insights
& Data Analytics**



**Enhance Interoperative
Judgement**

DIGITAL SURGERY | CSATS

A POWERFUL SURGICAL INSIGHTS PLATFORM DESIGNED TO MAKE SURGERY SAFER

↓ **34%**

lower risk of extended inpatient length of stay^{2,3}

↓ **68%**

lower risk of conversion to open surgery²

↓ **42%**

lower risk of blood loss exceeding 100 ml²

↓ **33%**

lower minutes mean operative time²

↓ **\$586**

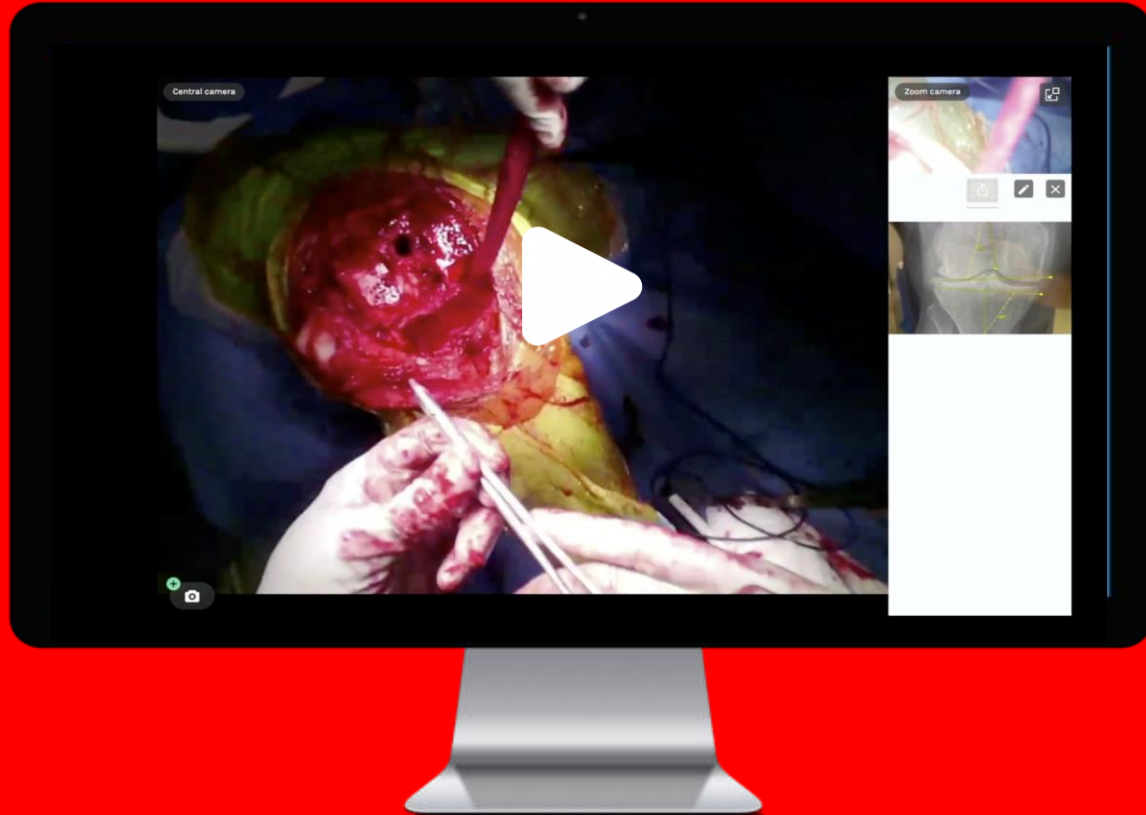
lower mean total cost (\$) per case⁴

Results that matter — a successful learning program can lead to improved outcomes across key metrics



DIGITAL SURGERY | EMPOWERING THE CARE TEAM

Remote assistance solution for medical environments. Using smart surgery glasses and a digital remote assistance platform, users can connect safely with an assisting surgeon, product specialist, or medical professional anywhere in the world, in real-time.



FOCUS ON VALUE...
DRIVING PRIORITIES...
INNOVATION & DIGITAL...
EDUCATION & AWARENESS...



HEALTHCARE IS A SOLVABLE PROBLEM...



AMPLIFYING HEALTHCARE VALUE FOR THE FUTURE...



We are **CHANGED**...

DIGITAL & INNOVATION as a force of good...

Drive **PRIORITIES** and **COLLABORATION**...

Focus on **SHARED VALUE** creation...

The **VALUE of DATA** for all...

Experiment & validate, **LEARNING MINDSET**...

PATIENTS at the heart of everything...



THANK YOU Q&A

INTERACTIVE DISCUSSION...