



# Tele-proctoring as a Model for Learning Surgical Skills in Rural Uganda

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# OVERVIEW

- **Global Surgical Gap:** 5 billion people around the world are deprived of even the most fundamental surgical care. This represents one of the most significant disparities in global health.
- **Kyabirwa Surgical Center:** Established in 2019 by Mount Sinai's Surgery Department.
- **Mission:** Design a sustainable, replicable surgical system.
- **Innovation:** Pioneering a novel approach to disseminate surgical expertise.
- **Objective:** Boost affordable, safe surgical care in isolated world regions
- **Collaborative Surgery:** Leveraging high-speed tech, surgeons from Uganda and Mt. Sinai (NY) work together in real-time on surgical tasks.

## KYABIRWA SURGICAL CENTER-2019

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## KYABIRWA SURGICAL CENTER-2023 ONGOING EXPANSION





# INTRODUCTION

- **Tele-Proctoring:** Utilizes telemedicine for expert surgical oversight, enhancing on-site surgeon capabilities.
- **Direct Impact:** Enhanced surgical skills lead to superior patient outcomes.
- **Digital OR:** Transforms operating rooms into digitally connected environments, optimizing surgical procedures.
- **Connectivity & Tech:** Reliable high-speed internet and innovative solutions are foundational for effective tele-proctoring.

# PILLARS OF THE KSC TELEPROCTORSHIP



High-speed internet connectivity (RENU)



Innovative technology (Microsoft-Hololense and others)



Reliable power supply (100 % Solar)



Dedicated philanthropy consultants (Mount Sinai Hospital)



Skilled committed, teachable local team

# SERVICES IMPACTED BY TELEPROCTORSHIP

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Endoscopy Services



**Surgery including**  
Laparoscopic/Keyhole  
Surgeries

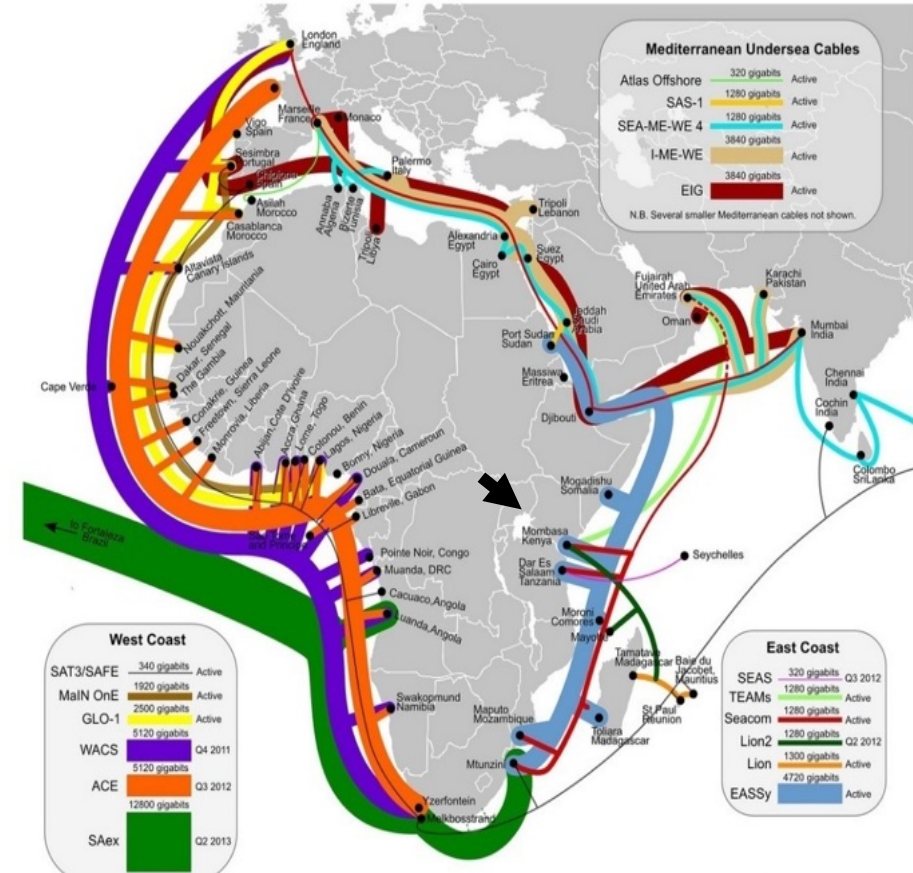


Diagnostic Pathology  
Services



Radiology Services

# 7-MILE-LONG UNDERGROUND FIBER OPTIC CABLE TO PROVIDE HIGH-SPEED INTERNET-RENU



# GLOBAL SURGERY: EVOLVING A SHARED SURGERY KNOWLEDGE STRATEGY

Surgeons advance knowledge with books and an atlas as a guide.



Surgeons advance knowledge by reviewing up to date publications.



The NEW ENGLAND  
JOURNAL of MEDICINE

Surgeons advance knowledge by training at specialty centers and at "hands on" teaching courses.



Surgeons advance knowledge with the aid of a visiting expert; surgical missions.

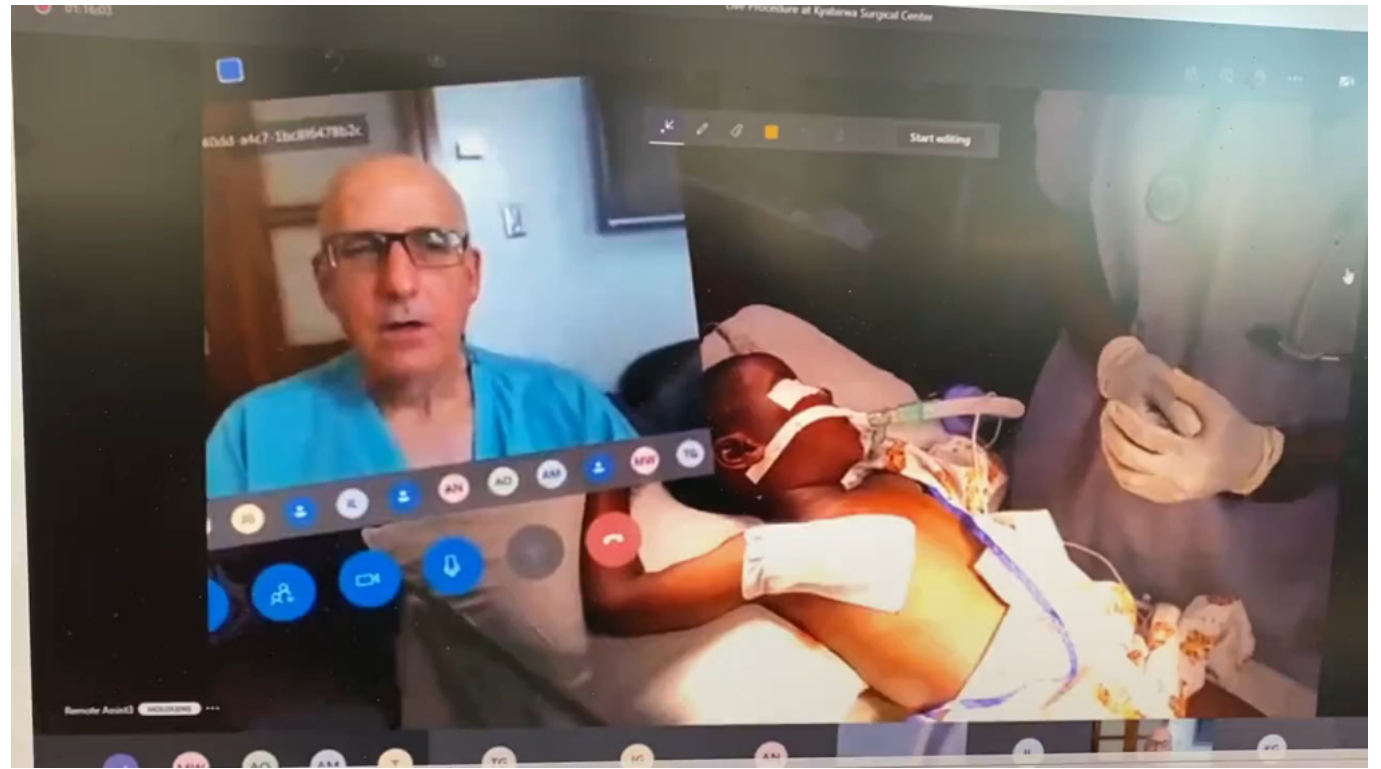


Surgeon advancing knowledge working with others from around the world, remotely with augmented reality and robotic assistance.

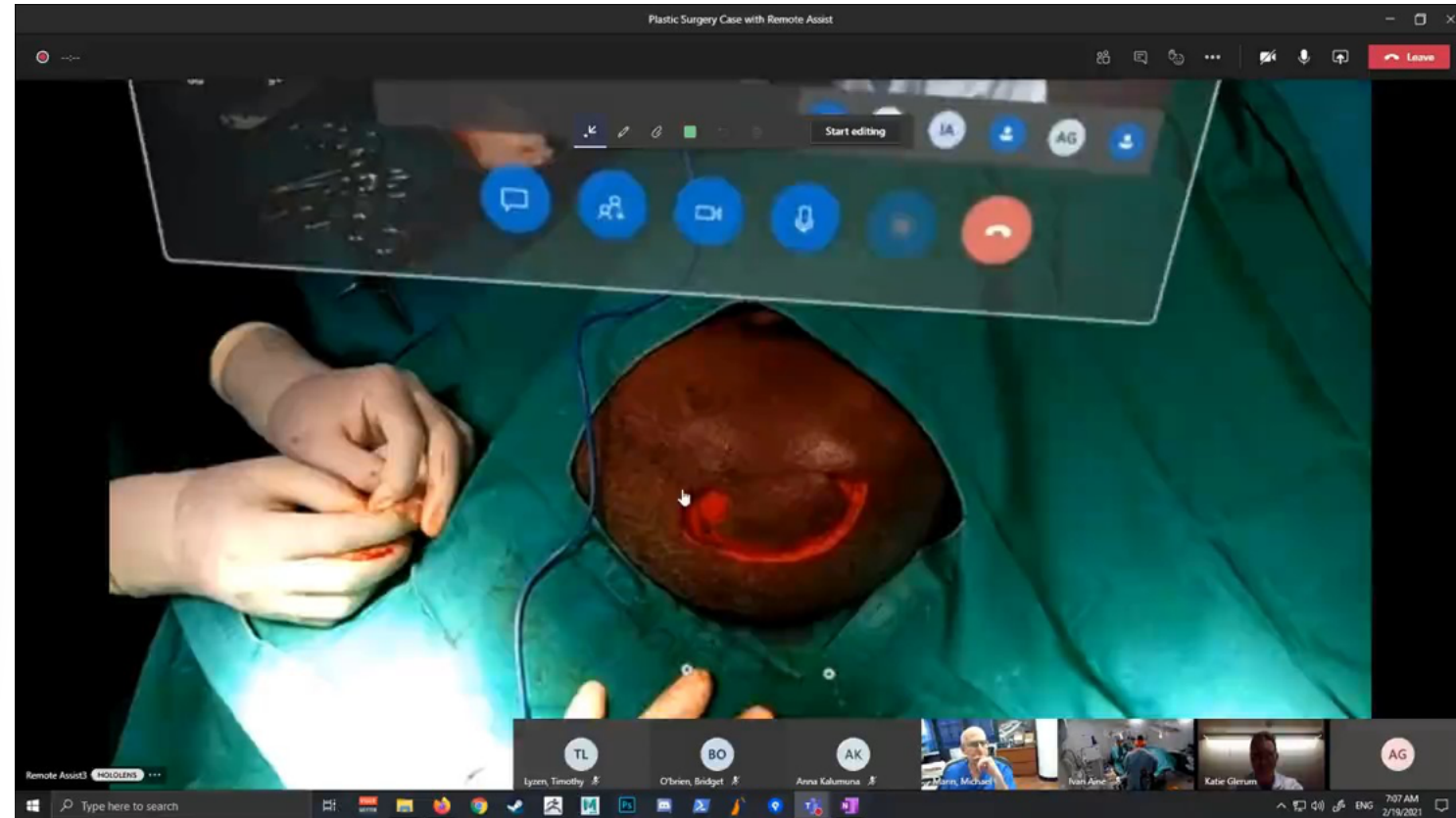


# REMOTE ASSIST WITH MICROSOFT HOLO LENS ENABLING SKILLS TRANSFER/MENTORSHIP

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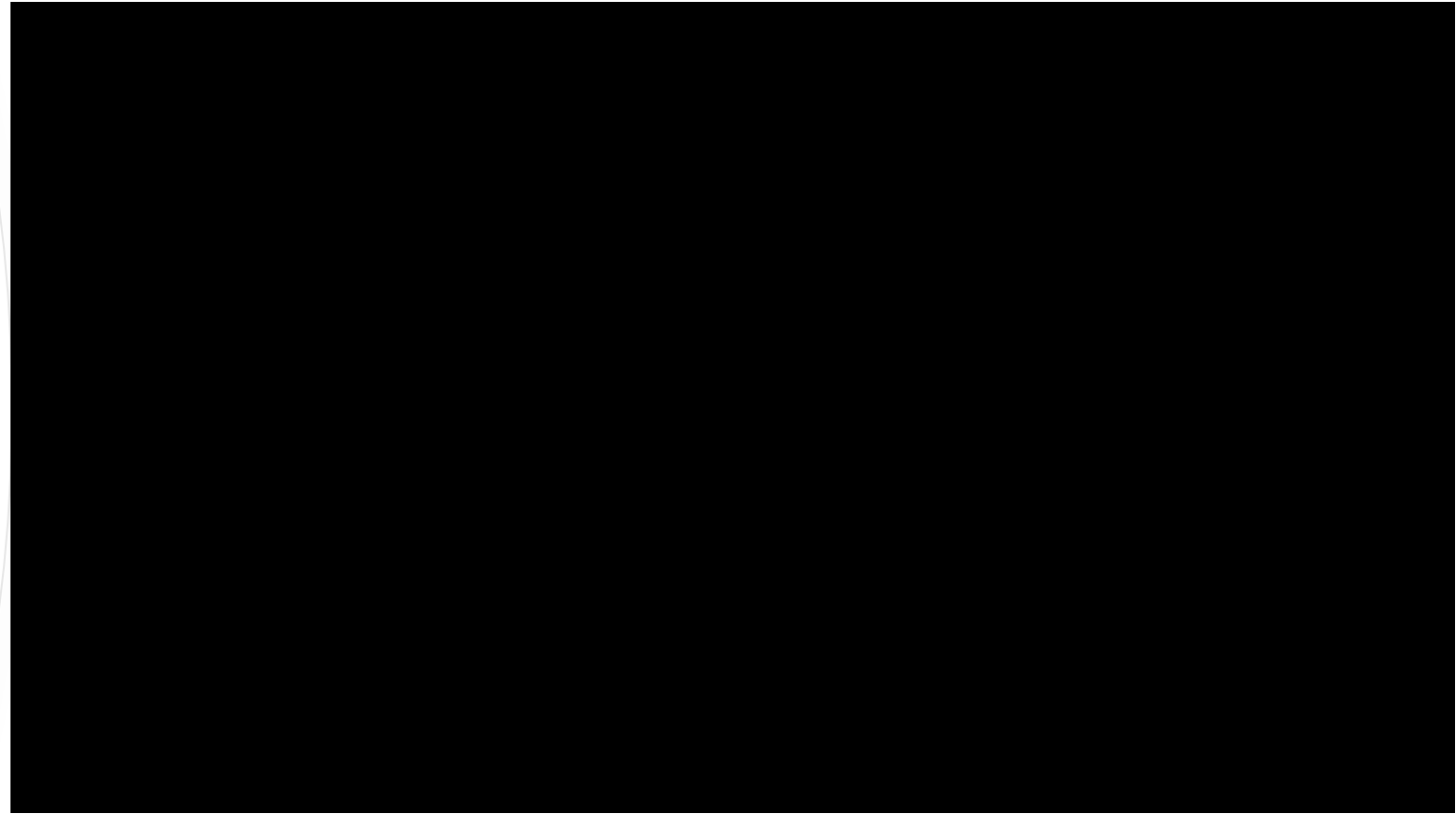
# WITH ABILITY TO ANOTATE REMOTELY





# **TELEPROCTORING IN ENDOSCOPY**

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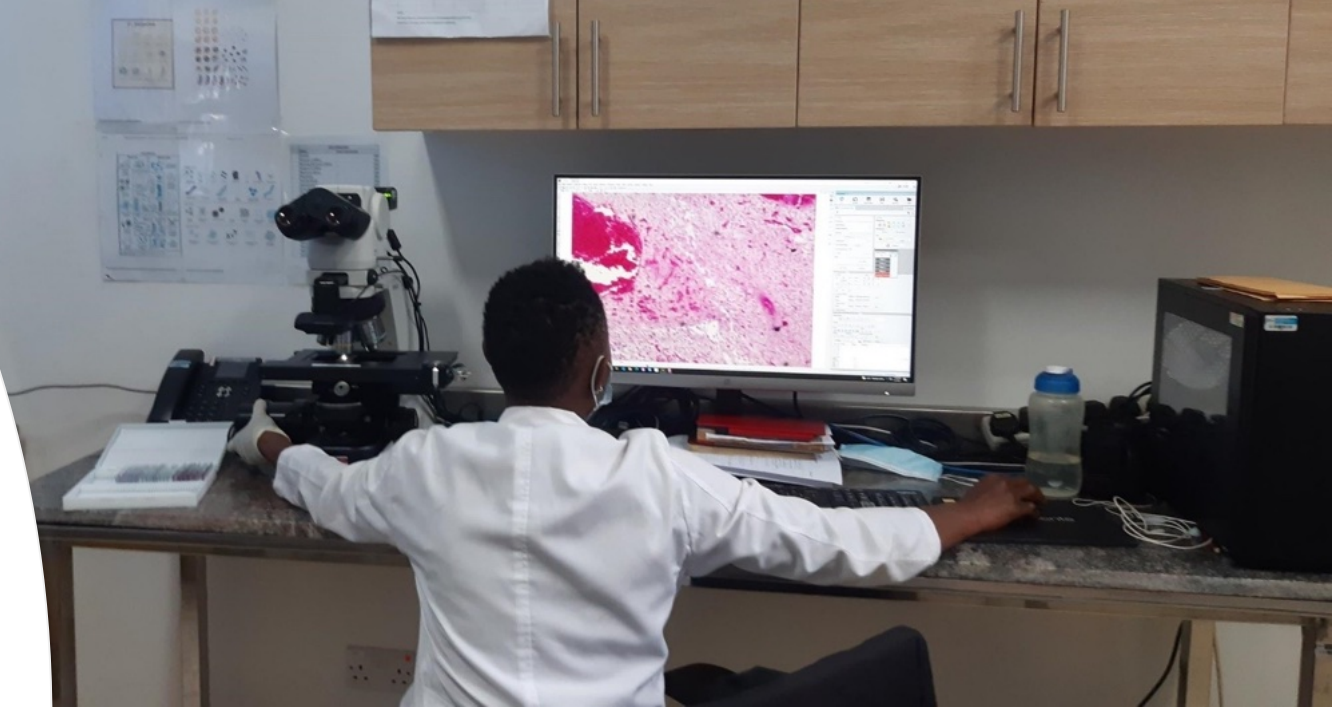


# TELEPROCTORING FOR LAPAROSCOPIC SURGERY- APPENDISECTOMY

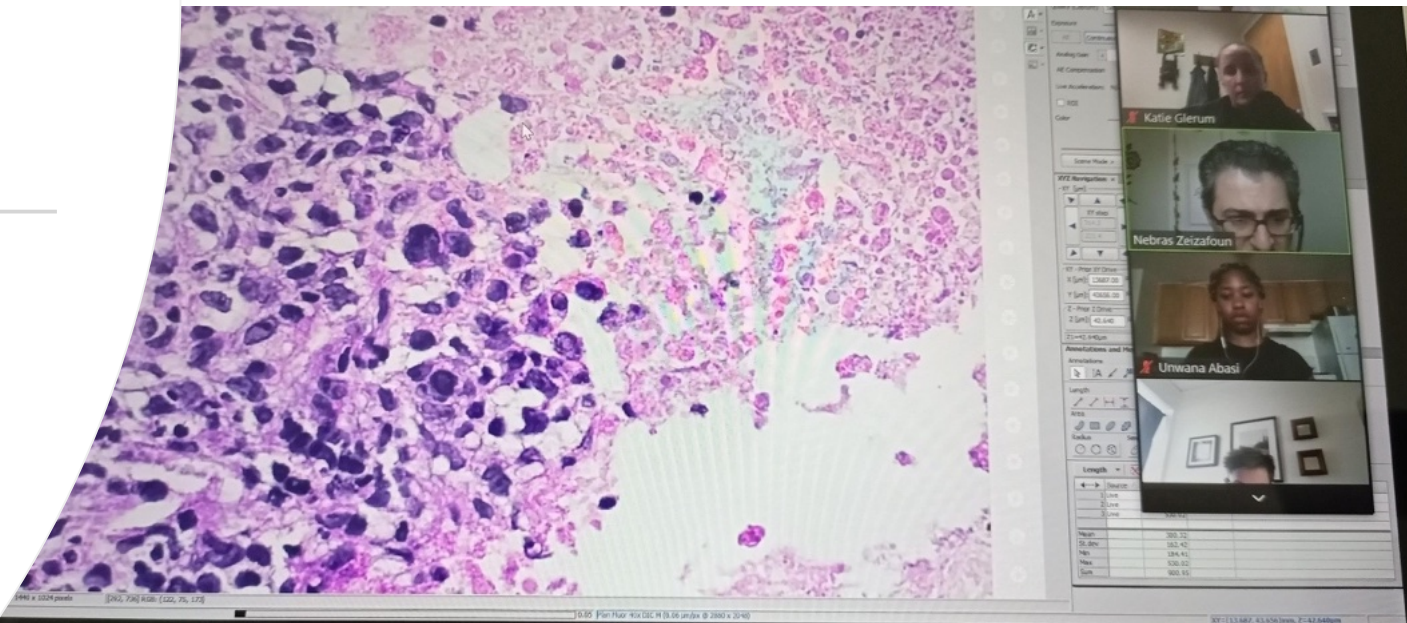


# TELEDIAGNOSTICS: HISTOPATHOLOGY

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# TELE PATHOLOGY SESSIONS



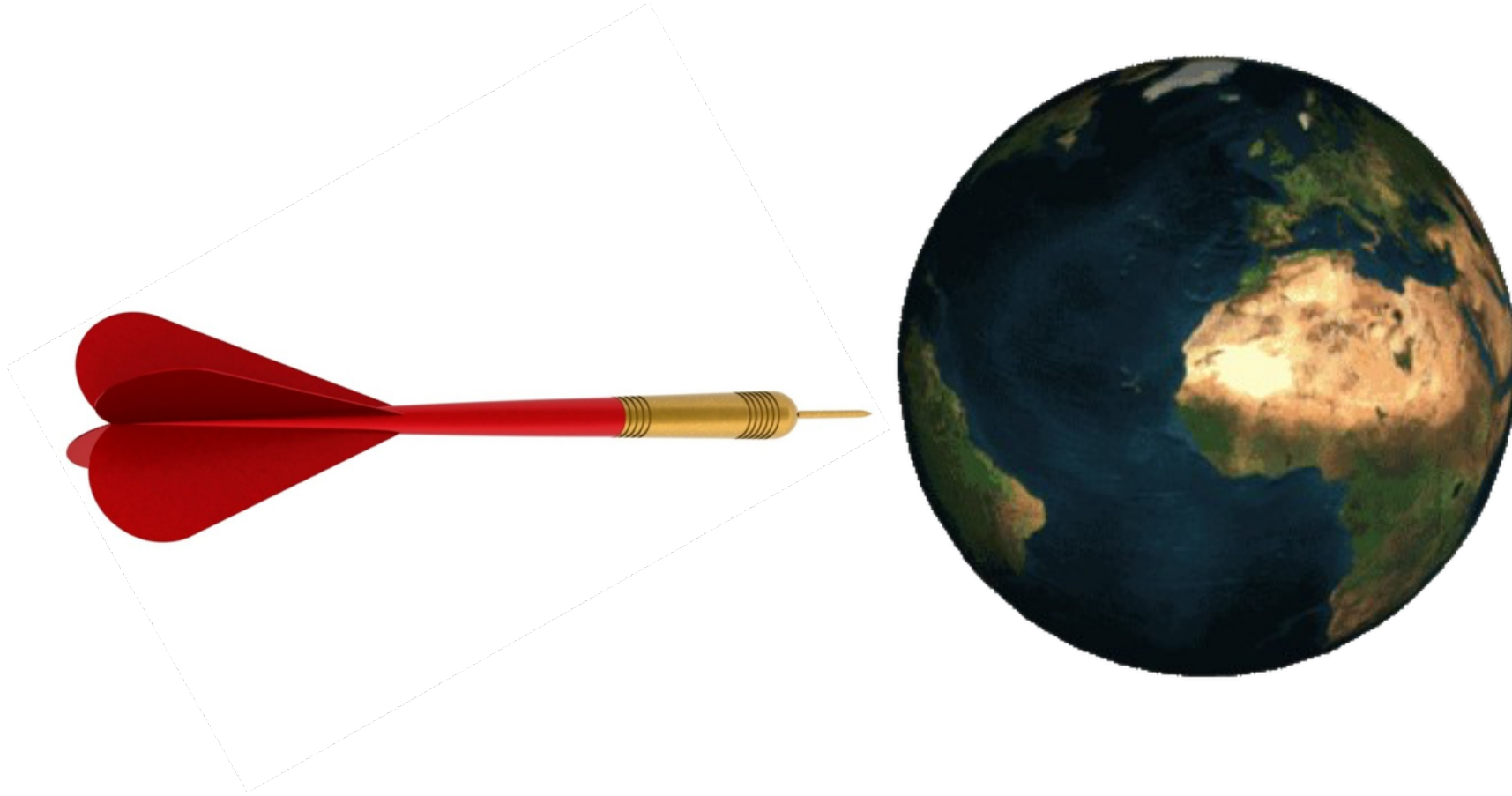


# SUMMARY

## ***TELEPROCTORSHIP EQUATES TO :***

- SKILLS SHARING
- SKILLS ACQUISITION
- SKILLS DEVELOPMENT
- INCREASED SURGICAL ACCESS
- IMPROVED PATIENT CARE

**REPLICATE THE MODEL IN OTHER REMOTE SETTINGS WORLDWIDE**





*Thank you*