German Medical Reference

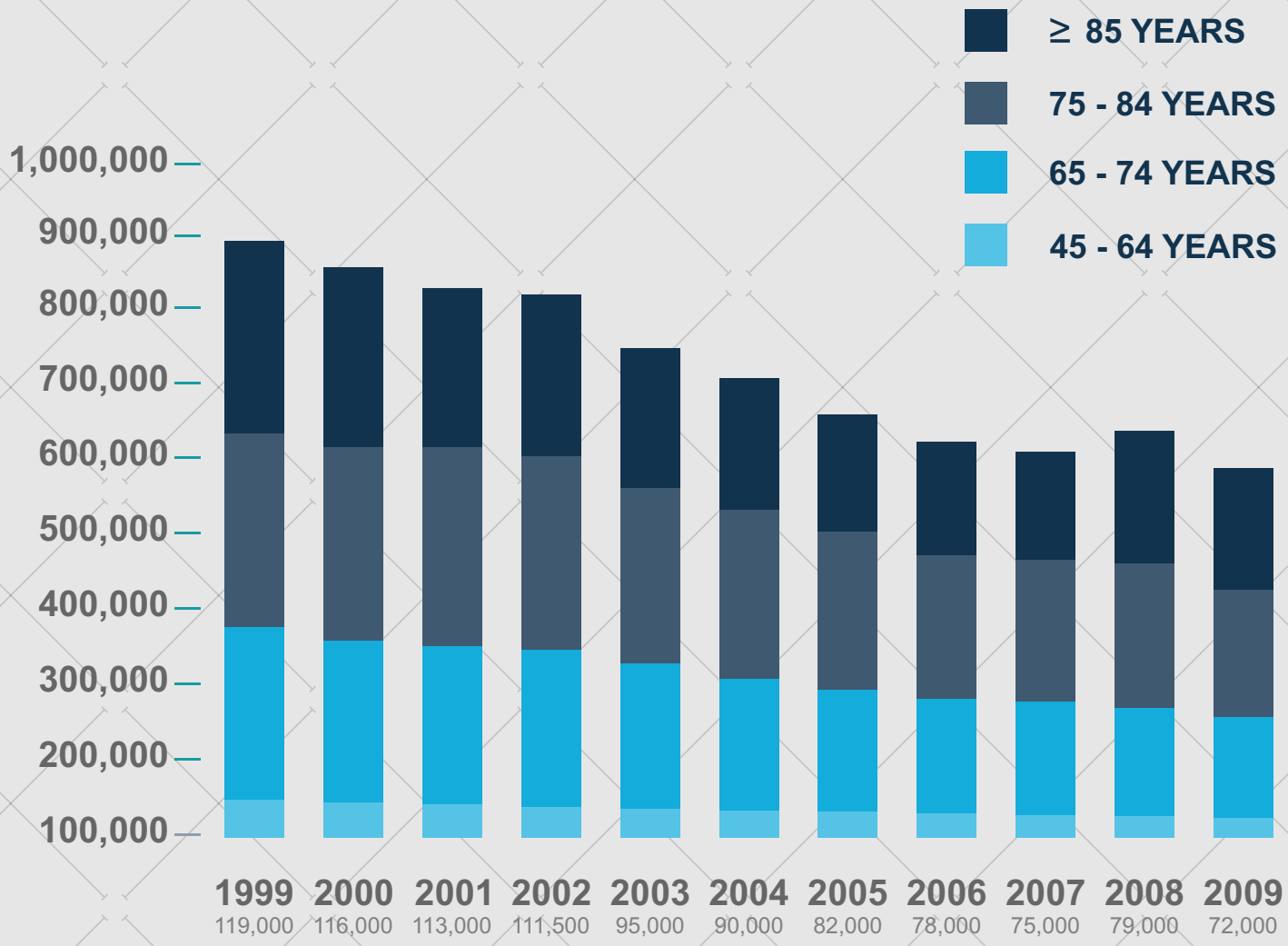
www.german-medical-reference.com

How Many Die from Medical Mistakes in U.S. Hospitals?

Now comes a study in the current issue of the Journal of Patient Safety that says the numbers may be much higher 2014 between 210,000 and 440,000 patients each year who go to the hospital for care suffer some type of preventable harm that contributes to their death, the study says.
That would make medical errors the third-leading cause of death in America, behind heart disease, which is the first, and cancer, which is second.

Surgent Mistakes

Through Number



* pg.2 www.scientificamerican.com/article/how-many-die-from-medical-mistakes-in-us-hospitals/

VR Surgery Simulator

GMR surgery simulator project

Virtual Reality is an immersive 3D experience that takes you beyond the boundaries of two-dimensional world to be part of scenarios more memorable than anything you had ever experienced. Our Virtual Reality surgery simulator is intended to provide medical students a proper and extensive learning process before they can perform surgeries correctly.

The learning curve in the medical process is a concept focused on two aspects:

optimization of operating time and reduction of patients bleeding. Based on statistics, a surgeon trainee needs to practice about 750 operations to improve surgical procedures experience before practicing real operations correctly.

Utilizing the new technologies in the simulation field, we are planning to provide custom simulation solutions to allow medical students to acquire the necessary skills involved in the medical procedures.

Why VR Surgery Simulator

is changing the global healthcare landscape!

1. Medical Stuff education and training

2. Testing the surgery before real time
   Providing the surgery scenario in details before the real-time surgery, without mistakes

3. VR Surgery real time assistance
   Providing VR distance access from other Doctors and supreme surgent to follow the surgery real time

VR Surgery

Simulator in Tumor treatment

The goal of brain tumor surgery is to remove as much of the tumor as possible without causing harm to normal tissue. Based on our experience in VR, we've been created the visionary approach to training the thousands of surgeons needed to treat different types of tumors.

Why VR Surgery Simulator?

· Surgeons can practice a realistic procedure thousands of times before ever operating on a patient.

· Immediate feedback on surgical performance and effectiveness gathered in a quantifiable way.

· Increase the number of available cataract surgeons in a scalable way to the tens of thousands needed globally.

· Improved safety and reliability in patient outcomes using quality control documentation.

Pre-Surgical planning and surgical approach

The VR surgery simulator Is designed to expose lesion sites according to standard surgical requirements for optimal field of view, including soft-tissue incision, bone flap fenestration, and tumor curettage, to generate individualized pre- surgical plans. Final output images/videos (virtual situation) were used as surgical references, and relationships between lesions and neighboring tissues were examined.

Our approach in planning brain surgery

Improvements in surgical techniques and imaging technologies have revolutionized brain surgery in recent years. Brain Mapping in Surgical Planning in our VR surgery simulator is starting with own surgery protocol, including all the procedures before the real surgery.

Step 1

Taking CT Scans tests result that can show which areas of the brain are important to everyday functions such as vision, speech, touch, and movement. From this scan, the surgeon can determine whether the tumor involves these functional areas of the brain and figure out how much of the tumor can be safely removed during the surgery.

Step 2

Patient results Integration and testing with our VR surgery simulator performances. Imaging data would be transferred and integrated into full detailed surgery scenario to produce a VR simulation with no significant differences between virtual and actual tumor size measurements or subjective visual assessments

Step 3

The pre- surgical 3D anatomical reconstructions and intraoperative anatomical characteristics (virtual vs. actual data) and surgical approach (virtual vs. actual situation) measurement and subjective appearance were compared. The resolutions of the original CT images directly correlated with 3D simulation quality, with soft tissues most poorly represented.

Step 4

The 3D user interface reflects the surgery scenario through the VR simulation, allowing full manipulation of the 3D workspace by a hand-held pen and a virtual “tool rack. The tumor volumetric measurements can also be manipulated and exported in an image or video format allowing for complete surgical simulation.

Step 5

Finally, the patient tumor CT and the data would be integrated with our huge date and content of triggers, pathological anatomical data structures for examination in order to provide a preliminary evaluation in tumor treatment.

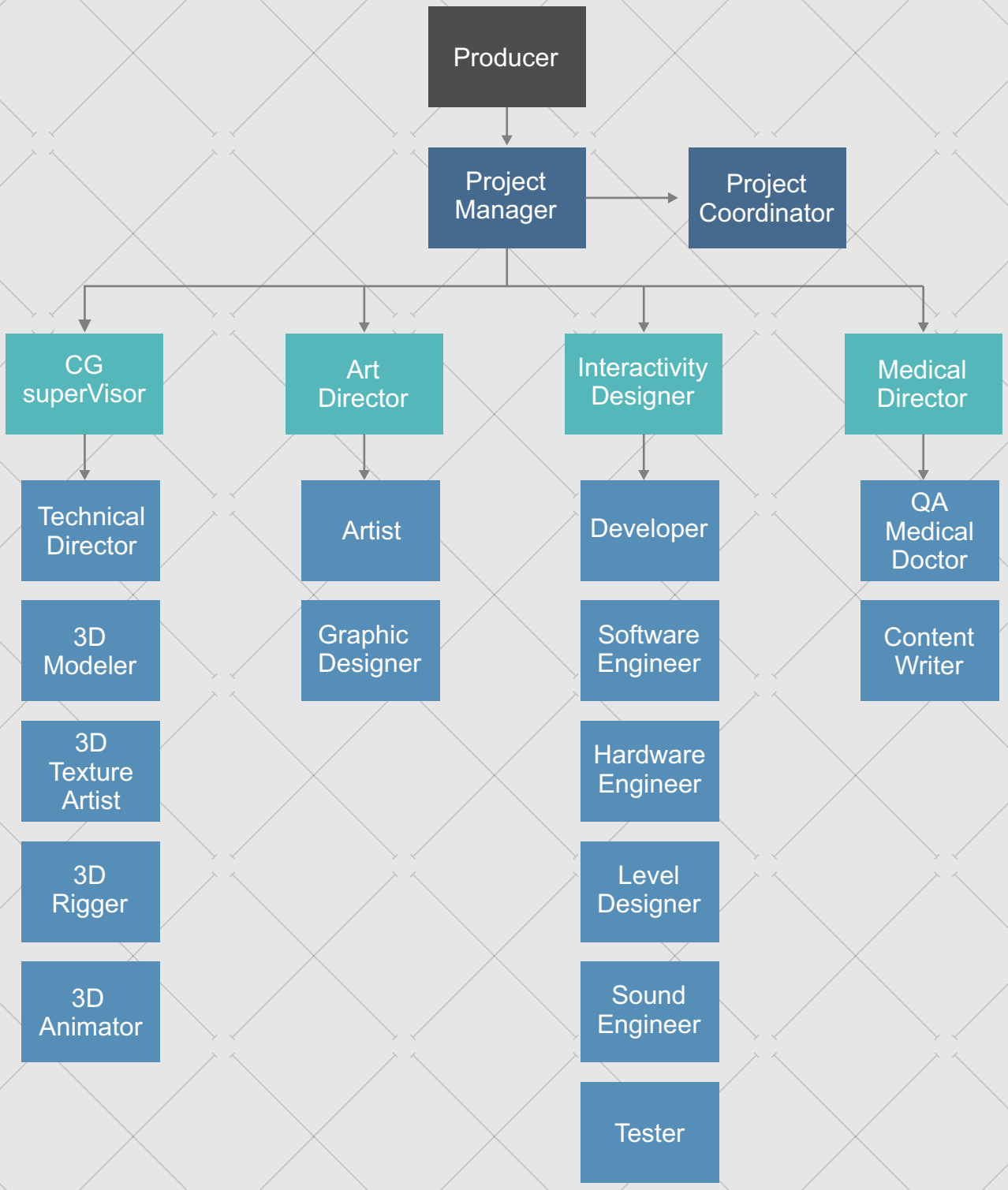
Summary

Based on this step, the anatomical structures of tumors treatment can be reconstructed using the VR Surgery Simulator with good accuracy in the case of simple fenestration, increasing treatment individualization, surgical competence level, and potentially reducing intraoperative complications. However, further specialization of VR tools applications involved specialized tools and procedures, such as drilling and implant placement, are urgently need. Our Vr Surgery simulator is the logical approach due to its simplicity, comprehensive multi-image integration, and wide availability, providing actual periarticular tumor size and surgical situation based on tumor measurements and subjective visual assessments.

VR Surgery

Project Plan Roadmap 2018

Team structure:



VR Surgery

Project Plan Roadmap 2018

Start with VR production:

VR application development:

Medical Content Writing:

Hardware Development:

VR Surgery

Project Plan Roadmap 2019

1.Starting with 3D production

2.VR application development

3.Medical Content Development

4.Hardware Development

VR Surgery

Project Plan Roadmap 2020

Business development

Project Branding

Marketing activities

Market Size

5,000 Universities

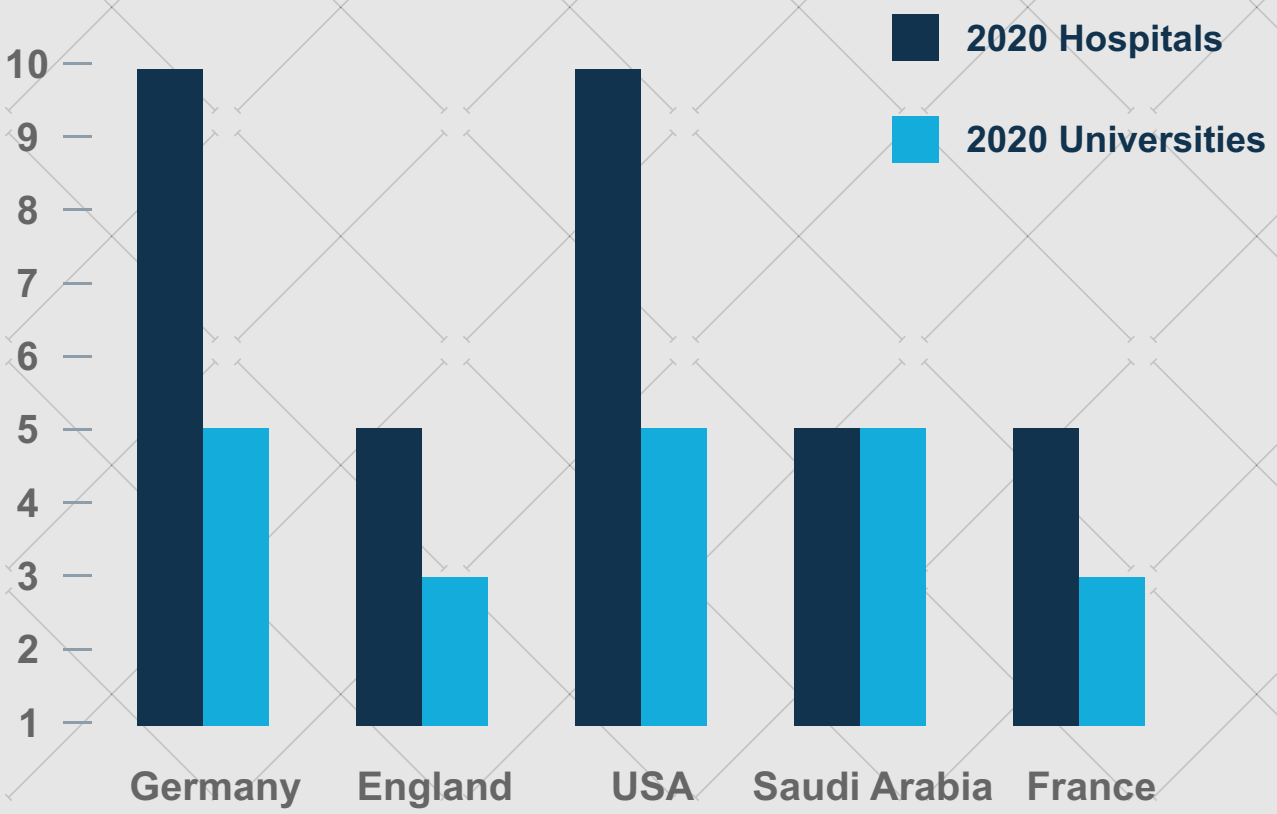
12,000 Hospitals

11,719 Medical Institutions

2,770 pharmaceutical manufacturer

VR Surgery Capitalization

in USD for 2020



Hospitals

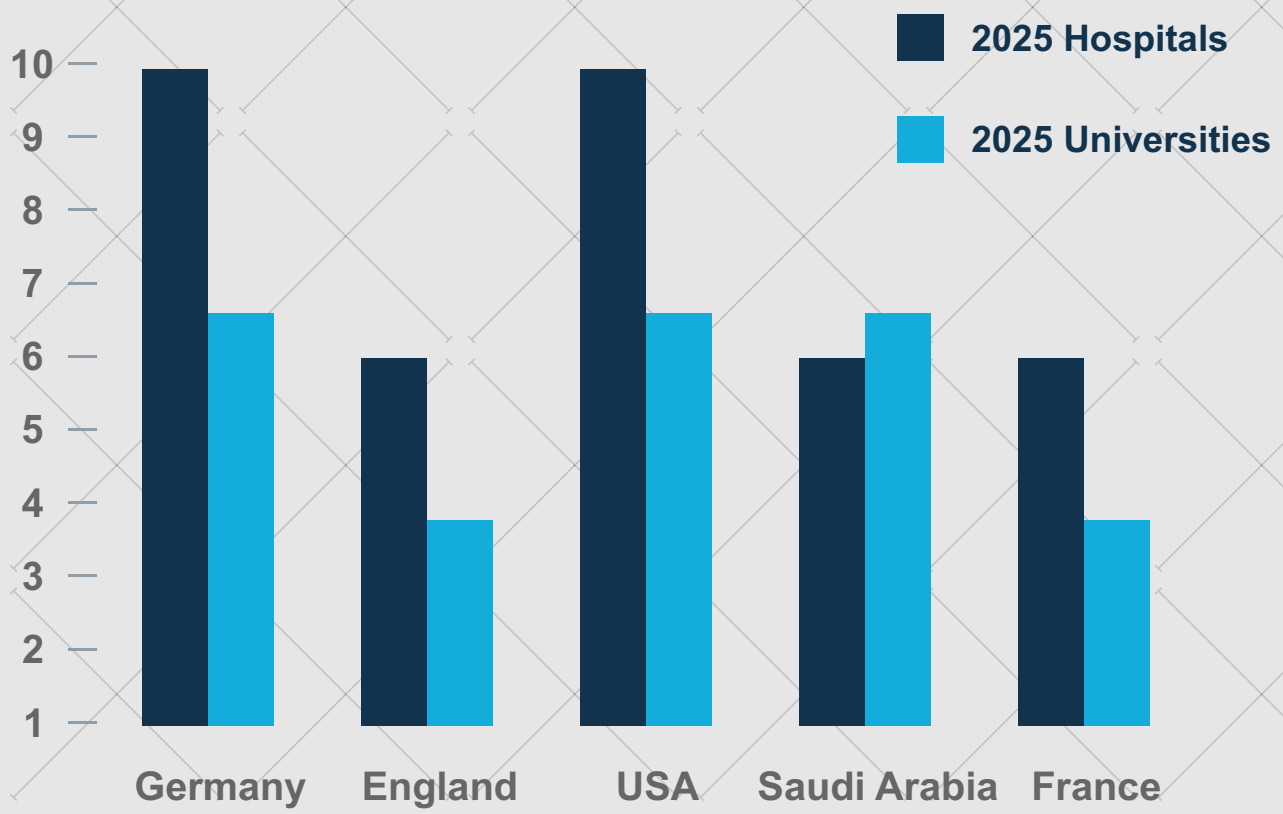
5,500,000 $

Universities

2,500,000 $

VR Surgery Capitalization

in USD for 2025



Hospitals

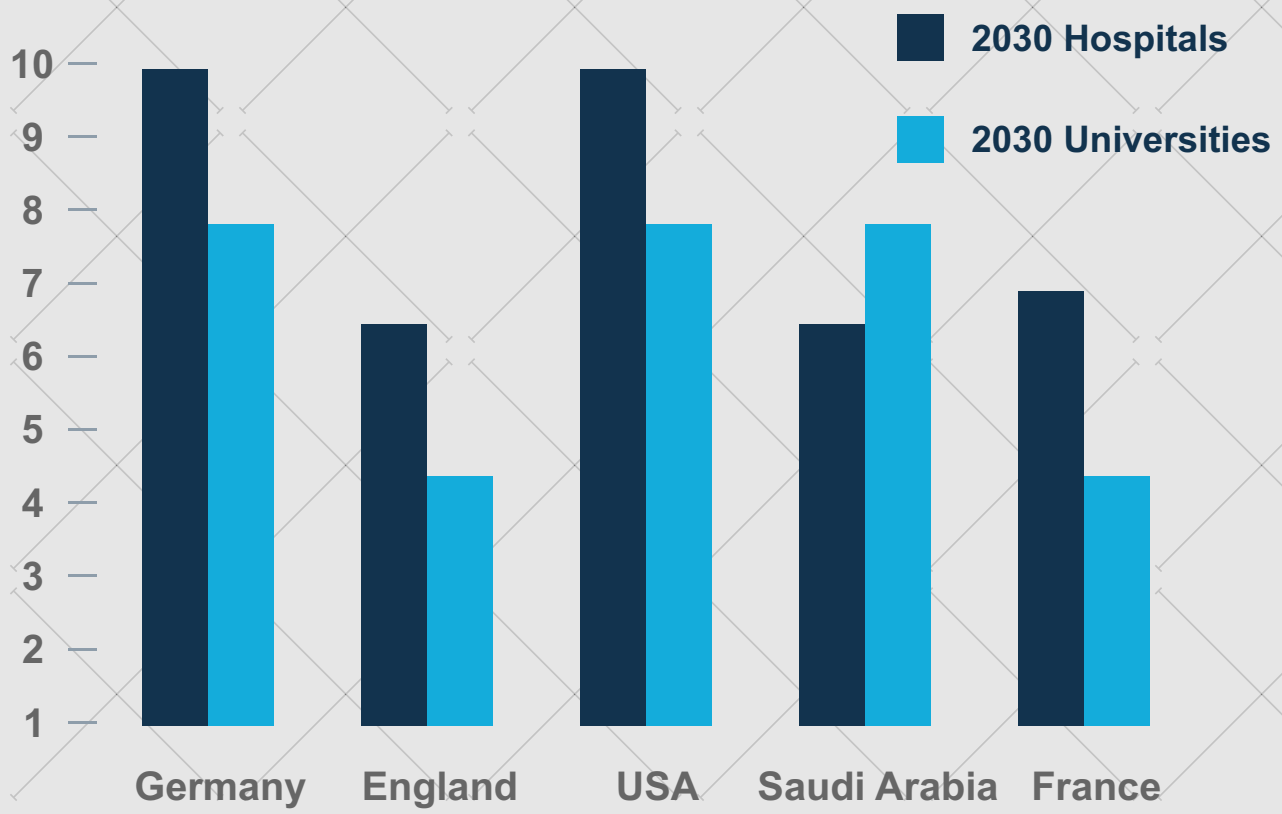
50,000,000 $

Universities

25,000,000 $

VR Surgery Capitalization

in USD for 2030



Hospitals

60,000,000 $

Universities

30,000,000 $