



PATHKEEPER HAS GOT YOUR BACK!

Pathkeeper has developed an intuitive 3D camera system – known as Pathkeeper – to deliver accurate and safe real-time navigation in spinal surgeries, similar to how the Israeli startup **Waze** revolutionized the concept of navigation.

Our solution allows the surgeon the benefit of precise navigation within the patient's vertebrae by combining a pre-surgery CT scan with real-time images obtained from a proprietary 3D camera seamlessly installed in the operating room and without causing additional radiation.



THE PAIN

Navigation-based spine surgery is rapidly becoming a standard of care due to the crucial role navigation systems play in enabling higher accuracy. This leads to benefits such as reduced post-surgical complications and pain, and increased patient trust.

However, the high costs of the equipment, installation, and maintenance, as well as the additional ionizing radiation characterizing existing solutions, make these inaccessible to smaller clinics where surgeries are increasingly being performed.

Pathkeeper's solution was developed to enable navigation-based surgery in both hospitals and all size clinics at a fraction of the cost of existing solutions.

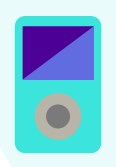


A SAFER PATH

6M spinal surgeries are performed each year globally.

Patients and surgeons alike have the same aim- getting it right the first time - thus, preventing post surgical complications and repeat surgery.

To reach this objective, **Pathkeeper** provides the surgeon with accurate, up to date mapping of the spine. While **Pathkeeper** is suited to map all regions of the spine, it is especially useful for the smaller vertebrae such as the upper part of the adult spine, as well as for children where the need for accuracy is even greater.



OUR INNOVATIVE TECHNOLOGY

Pathkeeper's navigation-based solution is based on a **proprietary 3D camera** combined with a strong AI engine that incorporates **real-time images obtained during surgery** with a pre-surgery scan.

After a simple registration process of the surgeon's tools, the analytical engine is capable of accurately guiding the surgeon's movements within the patient's vertebrae, thus eliminating inaccuracies caused by surgeon manipulation, or accidental patient movement such as breathing.



GO-TO-MARKET OPPORTUNITY

Back pain is the **leading cause of disability worldwide** costing **\$50 billion in healthcare**, as well as **resulting in 264 million lost work days annually in the US alone!**

Pathkeeper intends to launch its first systems in the US, firstly targeting the pediatric surgery market and then expanding into ambulatory clinics.



ABOUT US

Erez Lampert, CEO and founder, is a well-known 3D medical imaging expert who has led various R&D projects in the healthcare and aerospace industries. Erez most recently led the development of the iTero Element Intraoral dental scanner, the leading dental scanner in the world. Erez holds a B.Sc. and M.Sc. in EE, specializing in AI, a B.A. in Mathematics, and an MBA, all from top Israeli universities, and all with honors. He has published several patents in the field of 3D cameras in medical applications

Dr. Opher Kinrot, CTO, has a Ph.D. in Physics from the Weizmann Institute of Science and is a graduate of the prestigious Talpiot IDF program. Dr. Kinrot has 15 years of experience in leading disciplinary R&D teams, co-founded OTM Technologies Ltd. in 1998, and served as its CTO. He has published several patents and articles on laser technology and non-linear optics.



OUR STORY

"After 6 years of developing 3D dental scanners systems I realized that I was more interested in saving lives than in saving smiles..."

I felt that leaving a mark and utilizing my expertise would be best done in the medical field. After meeting **Dr. Josh Schroeder**, an orthopedic surgeon in Hadassah University Hospital in Jerusalem, I learnt about the inherent problem that exists in current robotic navigation systems and the need for new research and development in the field to be done. Thus began Pathkeeper Surgical's journey.



WHAT HAVE WE ACHIEVED SO FAR?

We are currently **starting clinical testing** on **Pathkeeper** at **Hadassah Hospital** in Jerusalem and awaiting FDA approval.

Furthermore, **Pathkeeper** has been approved for a 2.5 million Euro grant from Horizon 2020 in the EU. We are seeking additional funds to complement the grant and support clinical testing and product commercialization.



WANT TO KNOW MORE?

Contact us: erez.lampert@deep-health.com
WWW.PATH-KEEPER.COM