

# ScoutCam Micro-Visualization Solutions Company Presentation

www.scoutcam.com

### ScoutCam gist

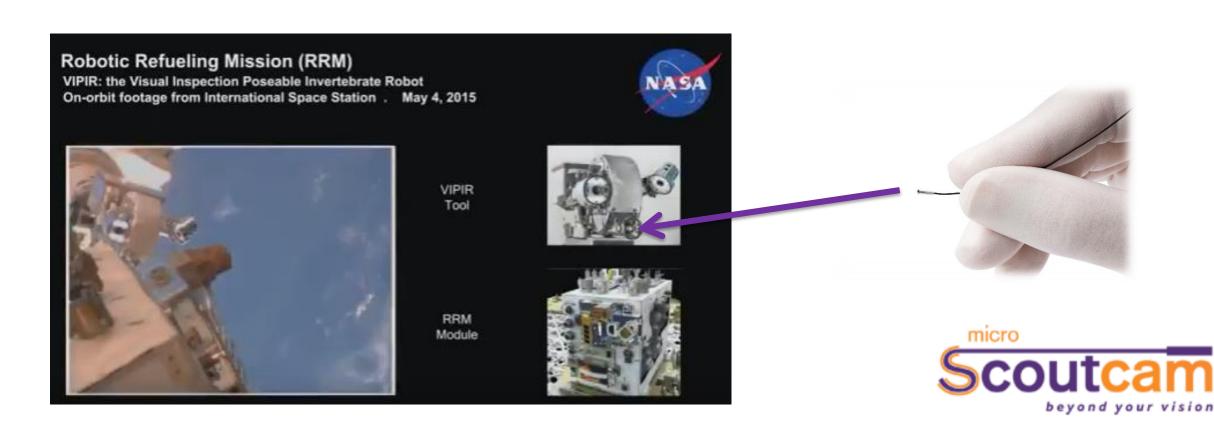
To become a global leader in providing unique and innovative **custom-tailored visualization solutions** to organizations across different industries based on small and highly resistant cameras and supplementary technologies.

ScoutCam customizes its cameras' size, illumination solutions, optic parameters (focal length, field of view, depth of field, etc.), data transmission, mechanical structure, cleaning method, and other characteristics according to specific customer requirements.



### The cameras era

- Cameras are everywhere, impacting everyday life
- Cameras are getting smaller and smaller
- Resolution and image quality keep improving
- Visualization solutions are added to applications like never before



### ScoutCam's solutions are not only the smallest...

#### ScoutCam's camera-based solutions have unique properties

- The smallest in the world (1mm OD), with high resolution and brilliant image quality
- Close minimal focal distance (2mm)
- Waterproof
- RF protected and protected from other potential OR interferences
- Long cables (>30m), or
- Wireless transmission (zero latency)

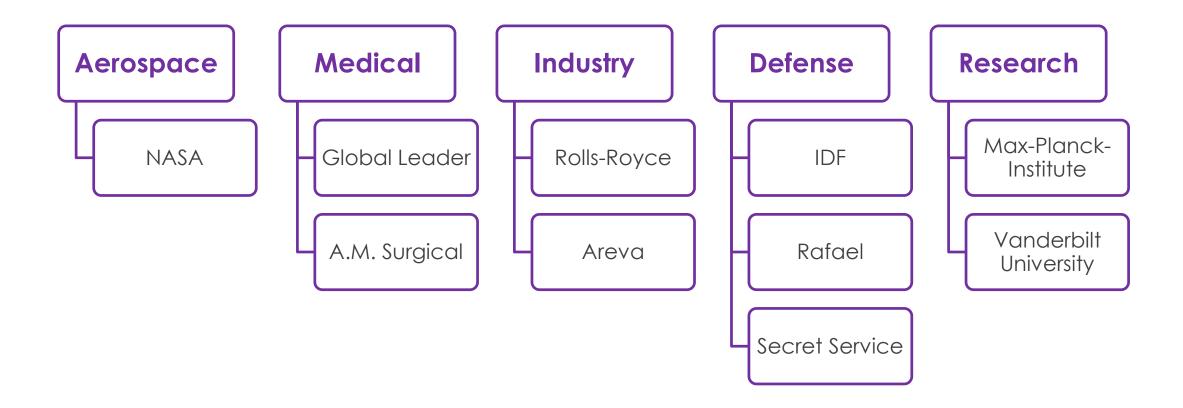
### ... they are also highly resilient as demonstrated by NASA

ScoutCam's cameras have been authenticated by NASA in the strictest environmental conditions

- Extreme temperatures (-127°C to +100°C)
- Vibrations
- Vacuum
- Radiation



### ScoutCam solutions serves multiple industries

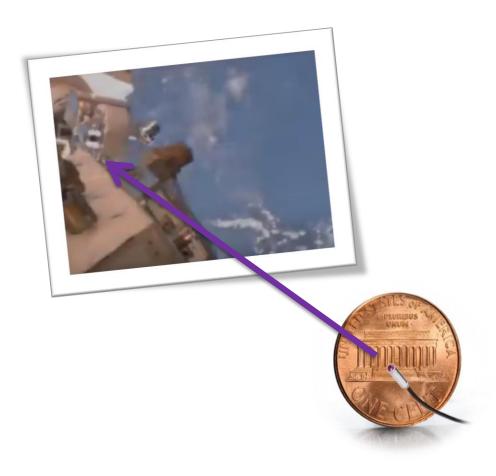




### ScoutCam solutions in space

- Two successful projects for NASA
- Custom-made camera and illumination
- Integrated into remote refueling robot
- Tested outside the International Space Station
- Live video from space

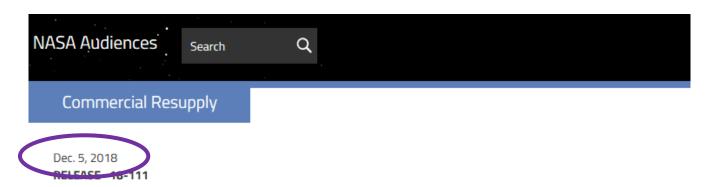








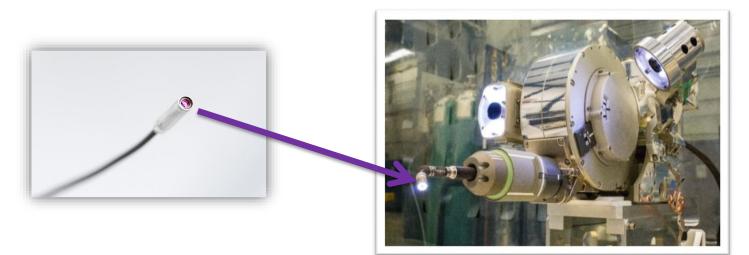
### ScoutCam solutions in space again!



## NASA Sends New Research, Hardware to Space Station on SpaceX Mission

Robotic Refueling Mission-3 (RRM3) will demonstrate the first transfer and long-term storage of liquid methane, a cryogenic fluid, in microgravity. The ability to replenish and store cryogenic fluids, which can function as a fuel or coolant, will help enable long duration journeys to destinations, such as the Moon and Mars.

https://www.nasa.gov/press-release/nasa-sends-new-research-hardware-to-space-station-on-spacex-mission



NASA RRM3 Robot ScoutCam inside

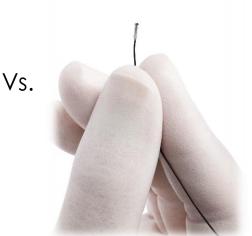


### Expanding markets – Medical

#### **Unique Selling Propositions**

- Small, easy to use, patent protected, proprietary technology
- Small footprint allows larger working channel or small diameter
- Wireless and resistant to magnetic fields and RF Ideal for OR
- Designed to meet medical regulation
- Additional valuable information to standard medical imaging
- Provides direct vision for therapeutic procedures
- Low cost and expertise lend themselves to single-use products



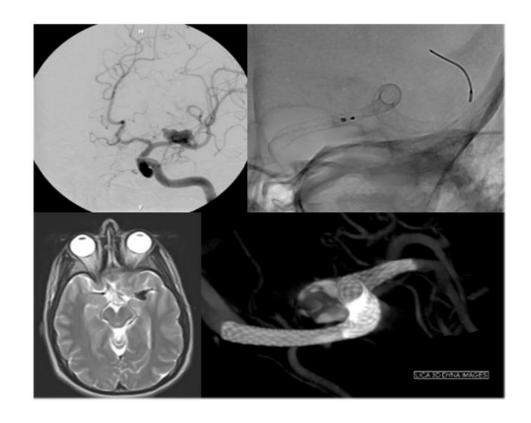




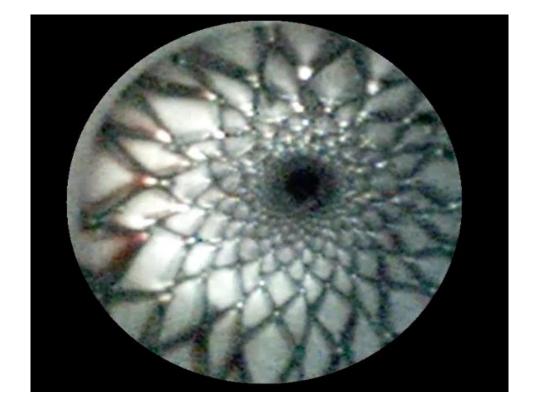
FlexLED – ScoutCam
disposable wireless
integrated flexible camera
and illumination solution
with total outer diameter
of only 1.6mm



### Examples of disruption



Neuro Stent Placement using standard Medical Imaging. Looking from outside the body to determine what's happening inside the body.

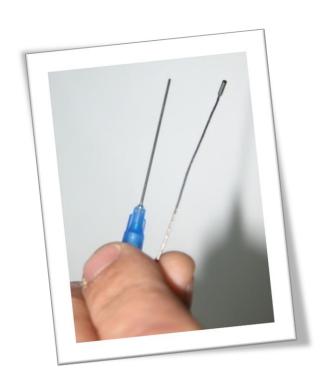


Neuro Stent Placement using ScoutCam micro camera. This In-vivo Stent Analysis is looking from inside the body to determine how and where the stent is placed.



Vs.

### Attractive immediate business



#### Medical

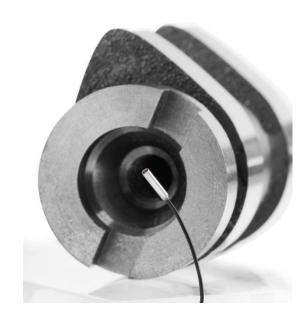
- Minimally invasive carpal tunnel surgery
  - \$1M development agreement in place with A.M. Surgical
- Minimally invasive spine surgery
  - 4 year supply agreement with a leading international corporate pending development milestone
- Specialties currently being addressed; Ortho, Neuro,
- Potential specialties: Pulmonary, ENT, GI, Cardio,, Radiology
- Additional contracts in the works all medical devices with integrated imaging



### Expanding markets – Industrial (Rolls-Royce and others)

#### **Unique Selling Propositions**

- Capability to offer custom-tailored imaging solution based on customer-defined parameters
- Capable of operating in extreme environmental conditions
- Proprietary video signaling can be delivered to an extended length, enabling image inspection at remote narrow and challenging environment
- Successful integration for single-use or multi-use products and designs
- Ideal for Non Destructing Testing (NDT)
- Predictive maintenance enabler

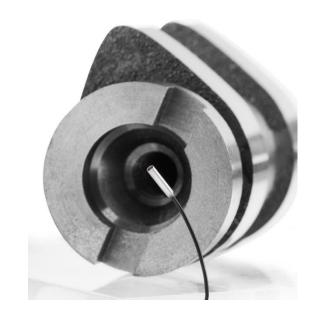




### Expanding markets – Industrial (Rolls-Royce and others)

#### Selected examples

- Remotely controlled robot for jet engine inspection and treatment at multiple hubs around the world
  - Feasibility study prior to product development with Rolls-Royce
- Nuclear reactor cooling chamber inspection ScoutCam visualization solutions are currently installed in devices used in multiple reactors for monitoring the state of the Uranium rods Among the customers are Westinghouse and Areva, and a recent collaboration with Rolls-Royce on a similar use in nuclear submarines





### Potential applications for ScoutCam in Security and Defense

- Military A unique small and light weight camera array with 360° field of view that can be mounted on a helmet or on a simple balloon to be elevated in order to view over obstacles in military operations in urban terrain – In progress with IDF
- Homeland security In progress with Israel Secret Service





### Our in-house technology

ScoutCam **micro-visualization solutions** are based on all-inclusive in-house technology.

- ✓ The smallest micro-cameras in the world
- Micro CMOS sensors, both proprietary and off-the-shelf, from high resolution miniature ones to HD.
- ✓ High-end DSP video processors with unique image processing
- Proprietary optic designs and micro-lenses assembly
- ✓ Various illumination solutions
- ✓ Long cable lengths based on proprietary technology
- ✓ Ultrasound-based guidance
- ✓ Endoscopes of various types (rigid, semi-flexible, steerable and flexible)
- Task/procedure specific tools (versus generic scopes with tools for every procedure)
- ✓ Highly resistant cameras (to vibrations, temperature, vacuum, radiation, magnets, etc.)
- √ 'Eyes' at the distal tip of any device







### Why clients seek to co-develop with ScoutCam?

- ✓ A complete solutions provider
- ✓ Integrating sensors/modules with other components (e.g., illumination, irrigation) into finished camera or product
- √ Flexibility, creativity, ideas, speed,...
- ✓ Global reputation in micro visualization
- Expertise and know-how in miniaturization and integration with completing technologies
- Profound cost-structure understanding
- Superior final units cost/performance based on long-term relationships with carefully selected global suppliers and sub-contractors
- Complete in-house assembly competency
- Vast experience in medical and sensitive industrial applications
- ✓ Omnivision, a sensors market leader an ally, mutual growth, win-win
- ✓ Strong IP Protection







### Production scale-up

- ✓ In house lab successfully produced and tested hundreds of units per year of a complicated medical device that includes hundreds of mechanical and electronic parts as well as complicated software
- ✓ In-house lab can produce up to 3k units/yr (mainly manual assembly)
- ✓ Production team is currently expanded
- Experienced COO recruited and a scale up production plan for current and future projects compiled
- Automation of assembly line feasible in-house or through sub-contractors
- Complete production outsourcing for larger annual quantities
   while keeping key components production in house to be considered





### Strategic patent portfolio

- Small diameter video camera (2010)
  - US Two patents, a) for camera head, and b) for medical device using it & visualization probe
  - JP, KR, IL One patent covers all three cases above
  - DE, FR, UK, IE Three separate patents for each of the three cases above
- Camera head (2016) Granted US, IL; Pending EU, JP, CA
- Integrated endoscope irrigation (2013) Granted EU, JP, IL; Pending US, CA; Divisional app. in JP
- Autoclavable imager assembly (2003) Granted US, IL, CA, UK, DE, FR, IE
- Multiple view endoscopes (2001) Granted US, DE, FR, UK, IT, JP, CA, NZ, MX
- Medical device comprising alignment systems for bringing two portions into alignment (2010) –
   Granted US
- Ultrasound positioning (2001) Granted US, CA, IL, MX



### Experienced leadership team



Prof. Benad Goldwasser Chairman of the Board



Yaron Silberman Chief Executive Officer



Amir Govrin
Chief Technology Officer



Avi Refael
Chief Operations Officer

Prof. Goldwasser, M.D., MBA is a urologic surgeon, inventor, entrepreneur and venture capital investor. During his business career he served as CEO and Active Chairman in a number of healthcare related companies. Among others, Prof. Goldwasser co-founded or held senior executive roles at Vidamed, Medinol, Medcon, Rita Medical, Optonol, GI View, and more.

Over 20 years of experience in the high-tech medical device industry, with expertise in marketing, sales, business development, and product management. Prior to ScoutCam Yaron held positions with Siemens, Given Imaging, Medigus, MedSim, and NiTi Surgical Solutions.

Over 20 years of experience in medical devices R&D. Prior to ScoutCam, Amir has been CTO of Medigus and has been responsible for the development of the MUSE™ device as well as the ScoutCam micro camera family of products. Amir has over 30 issued patents.

Over 25 years of extensive experience in production, engineering and operations management, in a wide range of industries, including pharmaceutical and medical device disciplines. Earning significant expertise in industrial projects, as well as in Complex Operational Systems management. Prior to ScoutCam, Avi held senior positions at various companies such as Kamada, Ophir Optronix, MDT, Dead Sea Works and more.



### ScoutCam's value proposition

- ✓ Cameras are getting smaller everywhere around us and placed in diverse environments
  - The resistance of ScoutCam's cameras to extreme conditions is highly valuable to companies in the Aerospace, Industrial and Defensive spaces
- Existing and upcoming contracts with tier-1 international partners
  - Significant revenue from day 1
- ✓ Huge potential in attractive markets (medical, security, military, industrial, nuclear, aerospace)
  - High margin customers, integrating visualization into existing products
- ✓ Harvest the investment of \$20m and 12 years of R&D
  - Global leadership position, cutting edge technology, strong IP & experienced team



### End

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