TO ADVANCE PLANET EARTH RESOURCE RESILIENCY THROUGH SAR ANALYTICS

Elly Perets, CEO
Radar indicates that Mars may have analogs of Earth's subglacial lakes
SYNTHETIC APERTURE RADAR

- RADAR – Radio Detection And Ranging
- SAR is an active sensor, hence transmit radio frequency.
- Developed in the 1950’s as a military application for all weather and day/night imaging solution.

First successful airborne SAR image, 1957.
Utilis has identified 3 revenue streams for its data analytics:

1. **Water Sector**
   - Potable Water leak detection
   - Wastewater leak detection
   - Reduce NRW
   - Prevent contamination and flooding
   - $6.6M ARR
   - 205 Customers
   - 50 Countries
   - $80M ARR by 2023

2. **Ground Engineering**
   - Proactively identify ground movements, drainage problem areas, 3rd party impacts
   - $250K revenues
   - $25M by 2024

3. **Agtech**
   - Ground saturation and salinity detection, precision irrigation, crop monitoring
   - First paying customer identified, $20M expected by 2024

Just to keep pace with anticipated global GDP growth, the world needs to spend $57 trillion, or on average $3.2 trillion a year, on infrastructure.
HOW BIG OF A PROBLEM IS WATER LOST BY LEAKS?

6 Billion Gallons of treated water is LOST due to leaking pipes in the USA daily and an estimated 240,000 water main BREAKS occur each year.

• 2017 Infrastructure Report Card, USA only
Algorithm & Georeferencing

Analysis and Quality Control

Translate to pipes area for survey
SDG Impact – Buenos Aires Case

- AySA prepared for prompt repair of each leak detected
- IDB financing support
- In 2 months:
  - 28% of work completed
  - 417 leaks detected, 404 repaired
- Daily volume recovered after 2 months 4080 m3/d ➔ daily supply for 9,000 people!
- Moving forward ➔ AySA & IDB plans 3 years Utilis’ service to reduce leakage in Buenos Aires using the SAOCOM
The power of SAR

- Day and night 24/7 imaging
- Independent of weather / clouds
- Penetrates earth's surface
- Detects materials and objects
- Can be automatically analyzed with algorithms

SAR imagery intelligence exceeds standard earth observation

L-band, 1.3 GHz
Efficient and accurate survey of very large areas – 3.500km²
Utilis’ core IP creates strong barriers to entry

- **Noise filtering**, particularly in urban areas
- **Geo-referencing** to detect topographic-related distortions, shadowing, layovers etc.
- Using the right band and incidence angle for **optimal penetration depth**
- **Airborne SAR** to cope with low radiometric, spatial and temporal resolution

Leak Detection 2.0 leverages SAR data analytics

Leak detection 1.0 = primitive, inefficient analog methods

Boots On the Ground
• Point-to-point acoustic inspection
• Inspect whole pipeline linearly, although most not leaking

HASN'T CHANGED OVER THE PAST 70 YEARS!

Leak detection 2.0 = is 5-15X more efficient!
The results don’t lie

Prince William County Service Authority (PWCSA)

18 leaks in 27 days

Deployments:
+Nov 27, 2017 – Feb 1, 2018

10 x More Effective

72 leaks in 10.4 days

Deployments:
+Nov 16-21, 2017
+Jan 3-11, 2018
+Feb 20-23, 2018

Traditional

<table>
<thead>
<tr>
<th>Area of Interest (miles)</th>
<th>200</th>
<th>200</th>
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<tbody>
<tr>
<td>Miles Inspected</td>
<td>200</td>
<td>30</td>
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<tr>
<td>Crew-Days</td>
<td>27</td>
<td>10.4</td>
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<tr>
<td>Leaks Found</td>
<td>18</td>
<td>72</td>
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<tr>
<td>Leaks Found per Mile Inspected</td>
<td>0.09</td>
<td>2.4</td>
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<tr>
<td>Leaks Found per Crew-Day</td>
<td>0.67</td>
<td>6.9</td>
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</table>

Utilis
TRANSFORMING SATELLITE DATA INTO ACTIONABLE INTELLIGENCE

U-View & U-Collect

Utilis analyzes unintelligible satellite data, finally enabling customers to extract commercial value

Dashboard

- Actionable Insight
- See calculated metrics
- Allows a manager to review results from the office

$40-80K per intelligence report, 4 REPORTS/YEAR annual service
# MAJOR CLIENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>Country</th>
<th>Duration</th>
<th>Start Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piave &amp; ATS, Italy</td>
<td>Italy</td>
<td>18 months</td>
<td>November 19</td>
</tr>
<tr>
<td>Zagreb, Croatia</td>
<td>Croatia</td>
<td>15 months</td>
<td>November 19</td>
</tr>
<tr>
<td>Yorkshire Water, UK</td>
<td>UK</td>
<td>24 months</td>
<td>November 19</td>
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<tr>
<td>San Antonio Water, US</td>
<td>TX, USA</td>
<td>36 months</td>
<td>December 18</td>
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<tr>
<td>Aqua America NJ, PA</td>
<td>NJ, TN, PA</td>
<td>24 months</td>
<td>April 19</td>
</tr>
<tr>
<td>Oman, Public Authority</td>
<td>Oman</td>
<td>24 months</td>
<td>November 18</td>
</tr>
</tbody>
</table>
Leadership

Lauren Guy - CTO and co-founder
- BS.C in Geomorphology & Remote sensing. Microwave sensing in other planets (predominantly Venus and Mars)
- MS.C in geophysics & hydrology (radiation, atmosphere and soil)

Elly Perets - CEO
24 years of experience in Executive Management, Enterprise Software Sales, Marketing, Business Development and OEM, Entrepreneurship.

Eddy Segal - VP Sales
15 year of experience as sales executive in international markets of which 8 years in the area of Leak Detection and efficiency improvement for Water Utilities worldwide.

James Perry – VP Sales, NA
16+ years experience working in all functions within fortune 10 company, and 10+ years in mid to small businesses managing strategic planning, focused on new markets worldwide.

Advisory

Prof. Dan Blumberg - Head of the Earth and Planetary Image Facility, Ben-Gurion University of the Negev
Blumberg has published numerous papers in the field of remote sensing, image processing, and target detection.

Prof. Masanobu Shimada
Vast knowledge in Synthetic Aperture Radar (SAR) and as a member of the Japanese Aerospace Exploration Agency
Stellar results in the water vertical: total revenues >$10M with only $3M invested

259 HIGH-QUALITY CUSTOMERS WORLDWIDE

>12,400 LEAKS VERIFIED, $13M/YEAR SAVED TO DATE

12,635,200 CUBIC METER EVERY YEAR = 3,260 MILLION GALLONS EVERY YEAR
EQUAL TO 50% OF MEDIUM CITY (EVERY YEAR AND GROWING)

STRONG NETWORK EFFECT

GREAT INBOUND BUSINESS DEVELOPMENT