



**HAMAC**  
HELLENIC ASSOCIATION  
OF MOBILE APPLICATION COMPANIES



**ΣΕΚΕΕ**  
ΣΥΝΔΕΣΜΟΣ ΕΤΑΙΡΙΩΝ  
ΚΙΝΗΤΩΝ ΕΦΑΡΜΟΓΩΝ ΕΛΛΑΔΟΣ



**Creating Synergies!**



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# Greece @MWC Barcelona





# 2017: the number of mobile devices is bigger than the world population!

## GLOBAL DATA

Mobile connections, including M2M

Dec 2017

8,427,019,671

▲ 4.70%



Unique mobile subscribers

Dec 2017

5,107,472,944

▲ 4.76%



Revenue/year

FY 2015

\$1.06T

▲ 2.18%



ARPU/month

FY 2015

\$10.25

▼ -2.78%

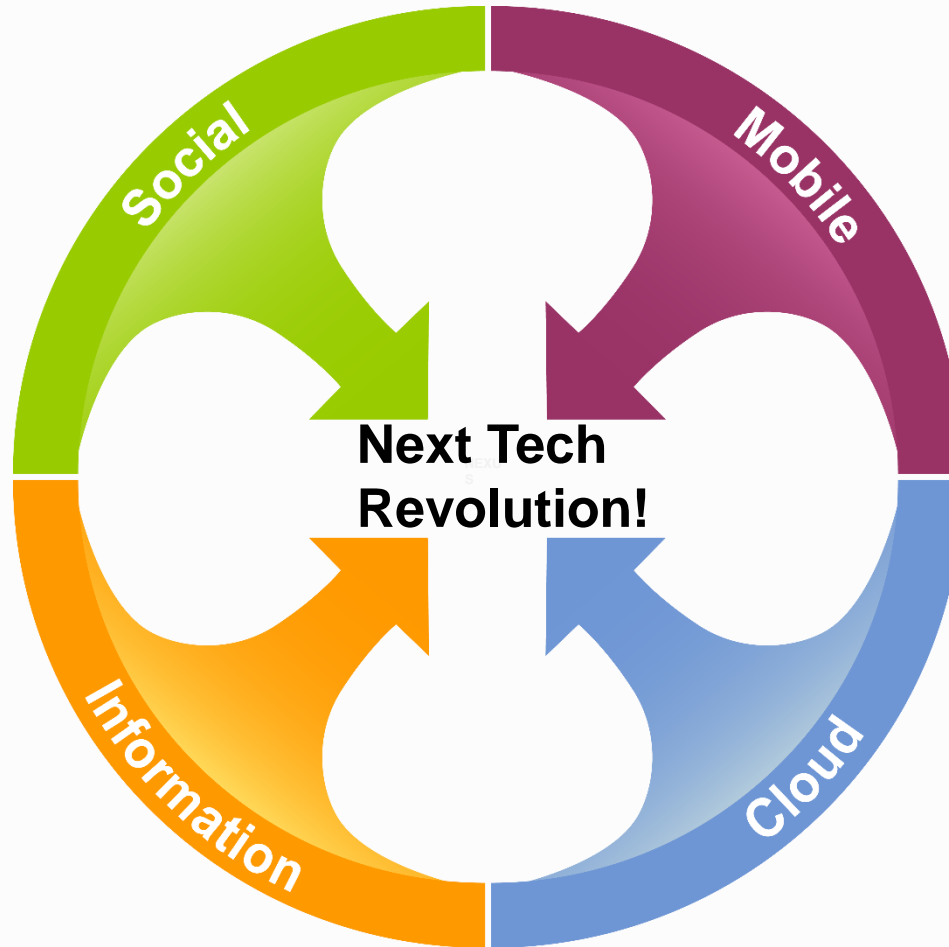


Source: GSMA Intelligence 2017, current year-end data except interpolated subscribers and connections



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# Gartner's Nexus of Forces: Social, Mobile, Cloud and Information



See "High-Tech Tuesday Webinar: Impact of Cloud, Data, Mobile and Social Forces on the Enterprise Software Markets"



## 1st revolution

Water/Steam



## 2nd revolution

Electricity



## 3rd revolution

Automation



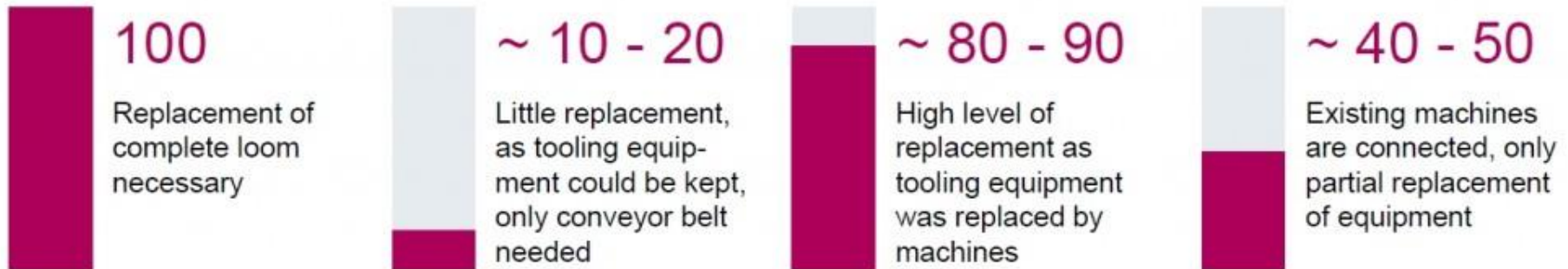
## 4th revolution

Cyberphysical systems



## Replacement of equipment

Percent of installed base





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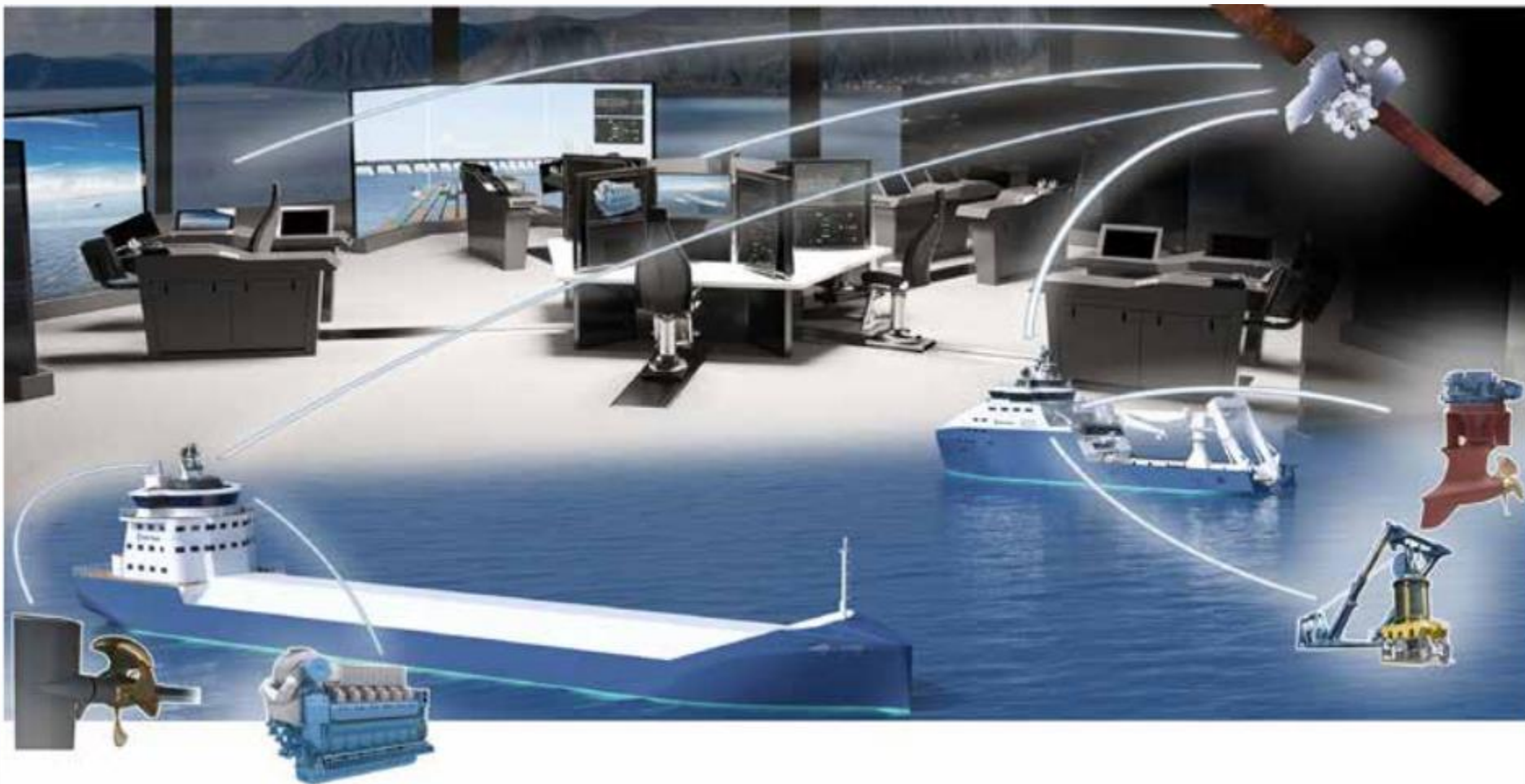
# *Industry 4.0*

*is the fourth industrial revolution where the brainpower that has gone into creating apps for smartphones is creating applications for **smart factories**, **smart cities** and **smart ships**.*



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# The era of Marine 4.0





\*\*\*\*  
Big data analytics



Propulsion and powering



Carbon capture and storage



\*\*\*\*  
Communications



Robotics  
\*\*



Advanced materials



Human computer interaction  
\*\*\*\*



Shipbuilding

# 18 Technologies that could transform the marine world



Deep ocean mining



Autonomous systems  
\*\*



Advanced manufacturing



Energy management  
\*\*



Smart ship  
\*\*\*\*



Human augmentation  
\*\*



Marine biotechnology



Sensors  
\*\*\*\*



Cyber and electronic warfare  
\*\*\*\*



Sustainable energy generation

\*  
ICT Enabled





# What is Ship intelligence



**Asset management**



**Optimisation & decision support**



**Remote & Autonomous operations**



**OBJECT  
DETECTION**



**INTERNET OF THINGS**



**SATELLITE  
COMMUNICATIONS**



**BIG DATA**



**AUTOMATION &  
ROBOTICS**



**APPLICATIONS &  
CLOUD**

**Enabling technologies**



## High speed Internet on Ships





## **Modern Ships generate a tremendous amount of Data**

**2800** sensors hardwired into vessel's **main control system**

**200** sensors in a modern main **engine room** measuring temperature, pressure and operation

**2TB data generated every 100 days** by a modern vessel

(source: Maersk Line)





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# Goals of ship intelligence



## Efficient and safe operations

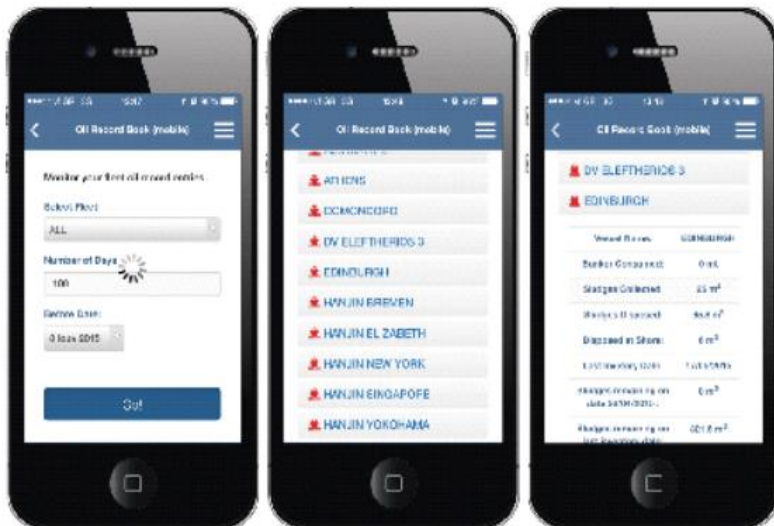




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Based on the **European Maritime Strategic Framework (EMSF)**, DanaosONE™ is a professional B2B versatile e-servicing Platform that seamlessly integrates heterogeneous systems end to end





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VIA.DOCSTREAM @MARITIME – ONE RING TO RULE THEM ALL



**MOTIVIAN**

## Multi-channel

- Email, web, mobile, scanners, fax servers
- Easy and convenient communication
- Available in multiple devices
- Established and bank-level secure solution
- No-training approach

## Documents

- Digitize and electronically sign/distribute documents
- Multiple formats from multiple sources
- Forms everywhere
- Increase uniformity using templates
- Single repository with lightning fast search

The "BluMail"  
solution for

Maritime

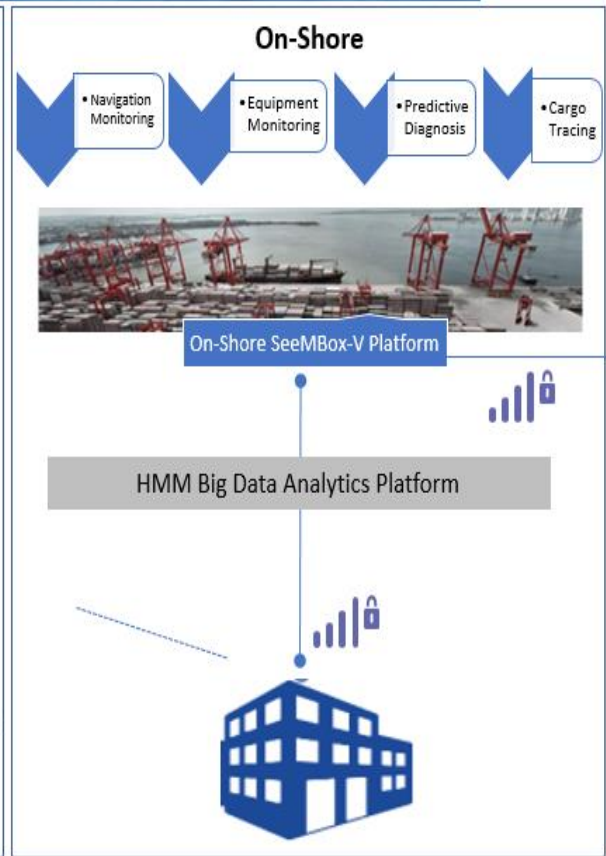
## Processes

- Strongly regulated environment
- Efficiency matters
- Audit-trail of actions
- Embedded experience

## Systems

- Portals are one-way only
- Systems are too complex
- Lack of skills and training
- Cross-departmental/system processes

# #Connected Ecosystem SetelHellas Case Study



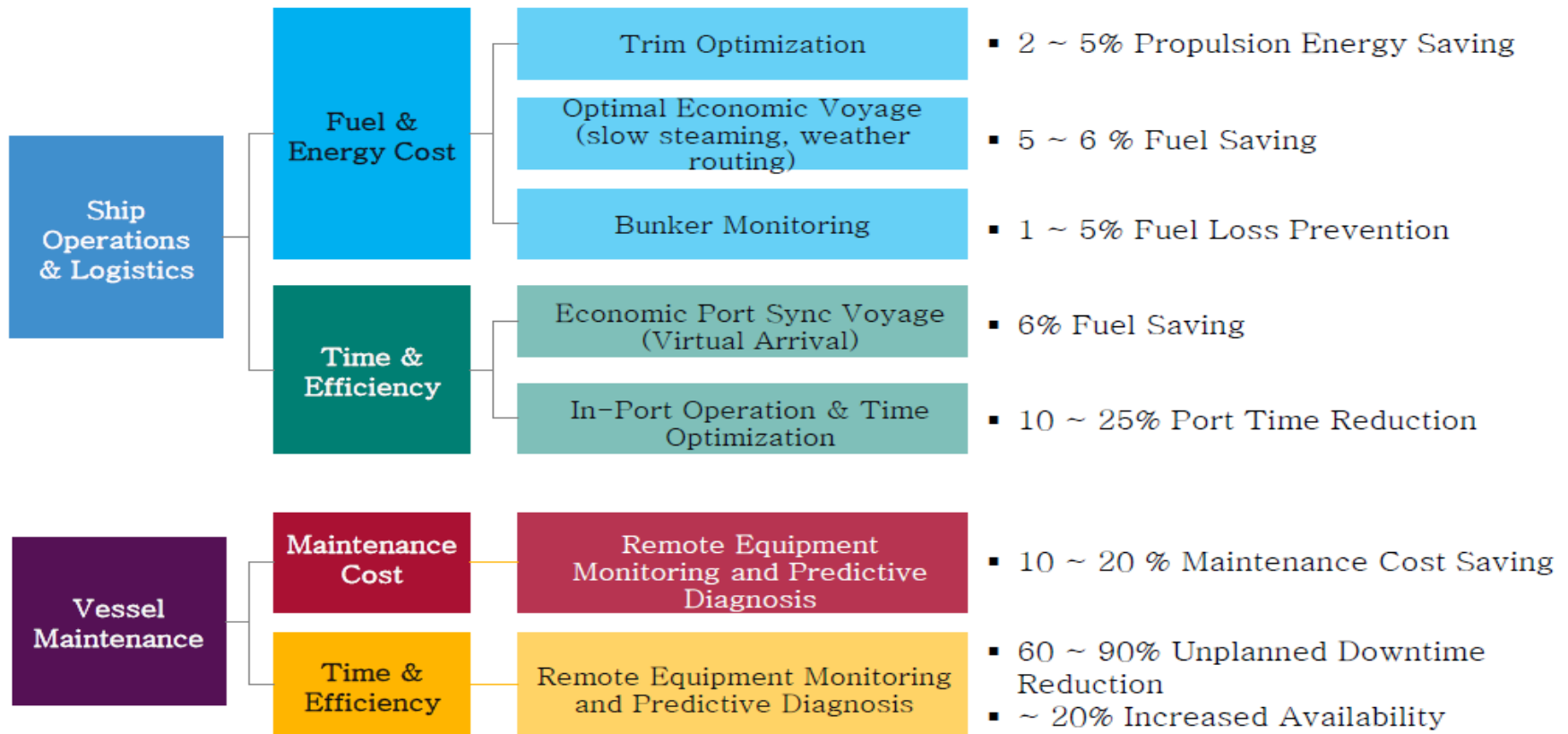
“Connected Smart Ship” is a joint initiative of HMM and SetelHellas to create business value for ship owners based on data analytics in order to transform the maritime industry by creating **connected ecosystem**.







## Value Propositions – Ocean Carriers Case

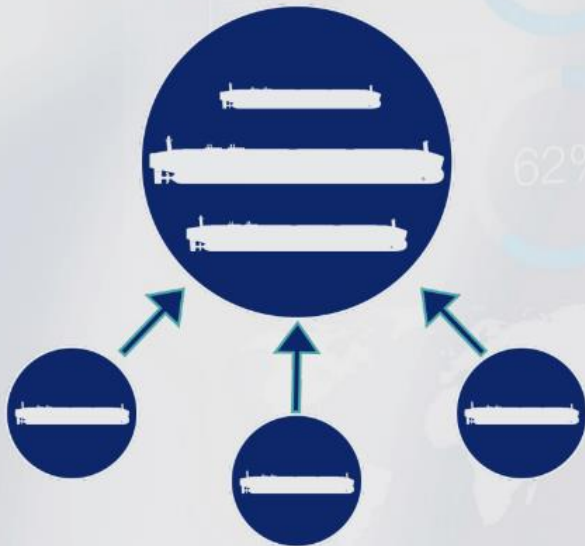




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# Shipping trends - Business

## Consolidation



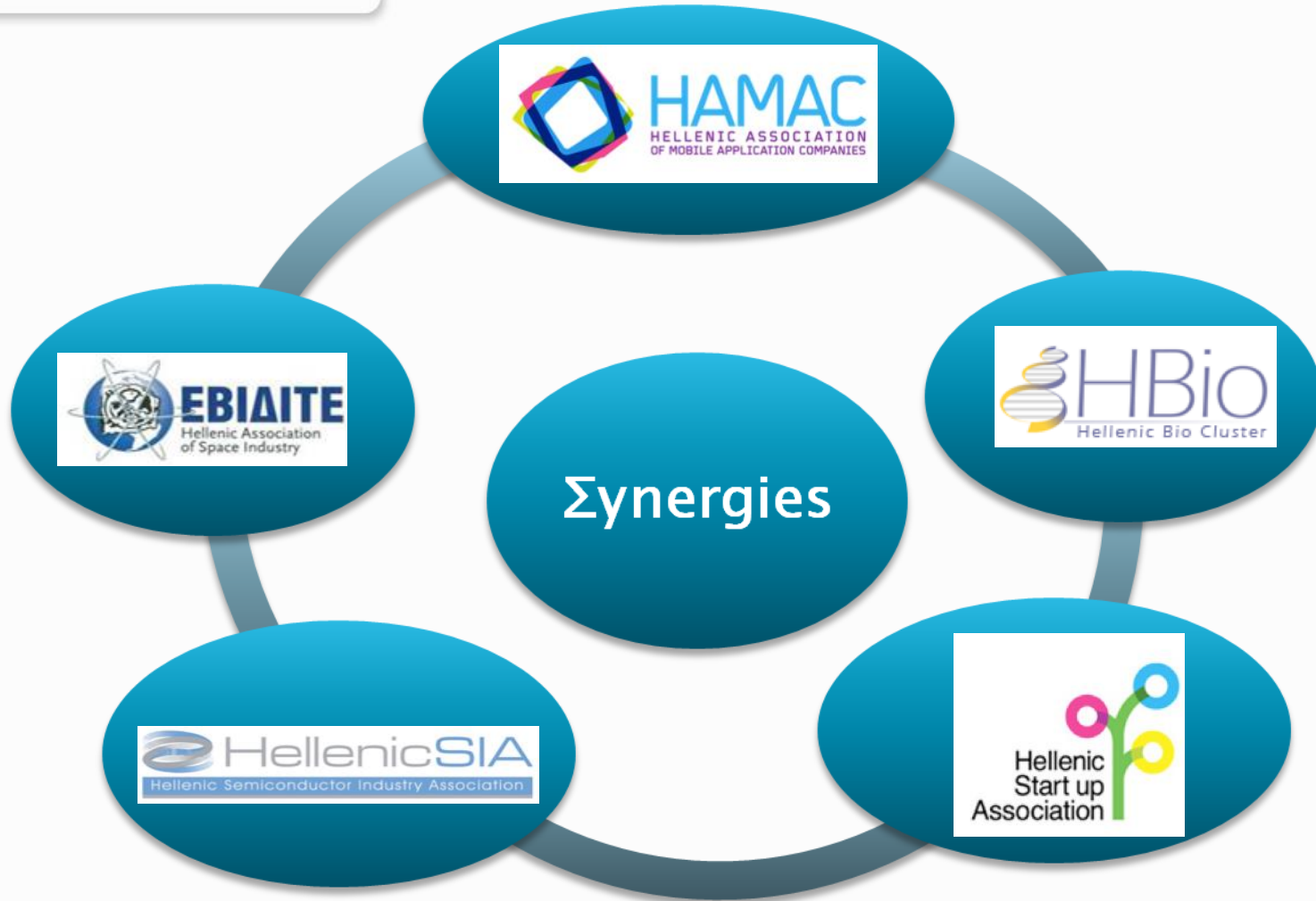
## New Players & Digital alliance





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# Σynergies





# ← Centaur

## Sensors for grain logistics



### Benefits to the Charterer (port-to-port & in-transit)

- Automatically check for zero-gas to save time at unloading
- Mitigate charterer's risk of demurrage
- Access real-time grain quality monitoring, reduce risks

### Benefits to the Ship-Owner

- Ensure personnel safety from toxic fumigants
- Ensure ship safety (e.g. overheated grain close to fuel tanks)
- Provide added value services to booming grain cargo market

### Benefits to the Insurer

- Cargo insurance risk mitigation with 24/7 visibility
- Ship insurance risk mitigation with actionable alerts



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# Performance Monitoring

## Propulsion Analytics

A company specializing in **Performance Monitoring** for the maritime industry that guarantees **minimum engine downtime & reduction of operating cost**

Based on a **thermodynamic model**, customized for each specific engine combined with a feed of routine operational data already collected from the vessel, Propulsion Analytics is able to provide:

- Diagnosis of possible engine faults & sensor/measurement issues
- Recommendations for maintenance and engine optimization
- Projection of developing faults for condition-based maintenance
- Comparison of multiple vessels (sister vessels, groups of vessels etc)



**WIN GD**  
Winterthur Gas & Diesel

Propulsion Analytics was selected by **WinGD** (one of the major marine engine designers) for the development of their **Engine Diagnostic System** that will be standard in all engines ordered after 1/1/2018



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# Booking & Reservations

## FORTHCRS SA, est 2000

Established in 2000, dedicated to the service of the ferry business and tourism. Subsidiary of FORTHNET SA.

Leading provider of Ferry Booking Management system with the largest clientele in the World.

The Only Ferry GDS in the world. More than 2.300 direct connected Travel Agents and more than 7.000 point of sales in the world.

Extensive coverage of the Greek ferry business, including connections to surrounding countries.

Rapid expansion in the Mediterranean.

Innovative, developing and introducing successfully: e-ticket, intermodal transportation, CLM (similar to BSP), ports check-in systems



HATTA: Hellenic Association of Travel & Tourism Agencies

### Greece

- ✓ All Ferry Companies
- ✓ 1.400+ agencies issuing ferry tickets
- ✓ 6 Bus Operators

### Italy

- ✓ 11 Ferry Companies
- ✓ 1 Train Operator
- ✓ Travel agencies

### Caribbean

- ✓ Ferry
- ✓ Mini-Cruise Operators

### Worldwide

- ✓ More than 7.000 Travel Agents, Port Agents & 100 GSA's



### Morocco, Tanger-Med Port Authority

- ✓ Electronic check-in system

### Germany

- ✓ 1 Ferry Company
- ✓ Travel Agencies

### Albania & Montenegro

- ✓ 5 Ferry Companies
- ✓ All Agents

### Turkey

- ✓ 5 Ferry Companies





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# CRM & BI

## Experts in CRM Technologies



Digital Marketing    Mobile Wallets    E-commerce    Social Media    Loyalty    Web Sites    Campaigns

**Customer experience**

SFA    CRM    Integrated Marketing Management    Business Intelligence

**Line of Business**

Email    Enterprise Social    Document Management    Anywhere Access    Unified Communications

**Productivity & Collaboration**



**pocketbiz**  
FIELD SALES REDEFINED

**Microsoft Dynamics CRM**

**marera**  
LOYALTY REDEFINED

**Office 365**

Cloud Infrastructure    Mobile Device Management - BYOD    Support    Networking    Systems Infrastructure    Virtualization    Security    Database administration



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# Health monitoring - Telecare

## Ship telecare solution by **vidavo** MOBILE HEALTH

- ❑ Personal Medical Record
- ❑ Real time advices and second opinion from Experts / Doctors
- ❑ Continuous monitoring & treatment on board
- ❑ Risk assessment for CVD diseases, kidney disorders
- ❑ Alerting – notifications based on science medical rules and intelligent tools.
- ❑ Eliminate the unnecessary deviations




Privacy and Security EU compliance (ISO27001, GDPR)  
Hardware and Software CE (MDR 2017/745)




**BT Devices**

**ECG**




1/12L ECG monitor  
Intended for CVD DISEASE

**BODY WEIGHT SCALE**




Body Weight / BMI  
Intended for Obesity and general use

**2IN1 BLOOD PRESSURE MONITOR & GLUCOSE METER**




Diastolic, Systolic, HR, Glucose level  
Intended for Diabetes & Hypertension

**PULSE OXIMETER**




Arterial Oxygen Saturation (SpO2%)  
Pulse Rate (HR)

**SPIROMETER**



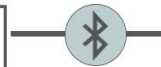
Intended for COPD Disease  
respiratory analysis and asthma

**TRIGLYCERIDE & CHOLESTEROL**



Total cholesterol  
- Triglycerides

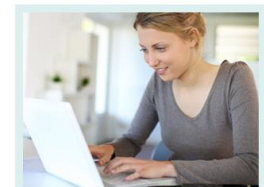
Vital signs recorded by Captain / Skipper



**vida24 app**



Vital signs transmitted via GPRS/WIFI / Satellite



Crew can have access on their PHR

**vida24 cloud**



Access and manage the vitals  
Send real - time advices



Insurance companies / Healthcare providers: Hospitals & Doctors

An innovative patient telemonitoring service, which enables doctor-patient ubiquitous interaction





SEPTEMBER 2017

*n*

## ASSISTANT PORT FEATURES

- Optimized scheduling
- Dispatching capability
- Monitor resource availability and PRM passenger's location
- Monitor ship details and PRM agents' details
- Automated assigning tasks to PRM agents in real-time
- Efficient allocation of resources
- Remote management and operations through use of mobile workforce technology
- Reliable passenger care professionally and efficiently
- Reliable and traceable SLA data (PRM service-level)
- True cost of the PRM service
- Compliance with data protection and privacy regulation of the EU General Data Protection Regulation (GDPR)





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# Future Developments



THE INTERNET OF THE SEAS SETS SAIL



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# about HAMAC

## Profile

Our members represent an innovative Greek ecosystem venturing in the global arena and seeking synergies with potential partners worldwide.



## History

Founded 2010 by 32  
companies with  
international presence

## Vision

To facilitate creation of Business Value by Greek-born enterprises utilizing mobile technologies in the Global arena.



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# HAMAC members

A collection of logos for member companies, including:
 

- aeikivnto**, **ALLUVION** TELECOM SYSTEM INTEGRATORS, **amaze** mobilizing life, **ANTCOR** ADVANCED NETWORK TECHNOLOGIES, **ATCOM** from content to value, **arX** inter ocrv media
- apifon**, **Δ|A|E|M|>**, **char. dimitracas s.a.**, **econais**
- ELYROS** Auditor Services S.A., **eyelead** software, **fasmetrics** INNOVATION YOU CAN TRUST, **fluid**, **GLOBO™**, **inaccess**
- ENTERSOFT**, **intale**, **micronet**
- PROTONYX** DATA SERVICES, **R|L**, **softline** More than software
- Retail@Link**, **simply**
- info@trip**, **ist** INTERNATIONAL SOFTWARE TECHNOLOGIES, **sexis**, **mVision**, **MELLON** GROUP OF COMPANIES
- storing** navigation beyond, **SchoolBusNotes**
- MLS** Making Life Simple, **Mobile Media**, **NEWS PHONE**, **NIOBUM** LABS, **Prisma** Electronics SA, **SOFTWeb** adaptive UI solutions, **tripinview**, **upcom** Bringing business and IT together, **virtualtrip** materializing innovation
- Sicomm** MOBILE SOLUTIONS, **Sports.comm**, **upstream**, **MOTIVIAN**, **velti.**, **allweb** improving the web intelligence.., **ATC** ATHENS TECHNOLOGY CENTER, **BEL** computer systems, **Cambolndustries**
- Veriah** SOLUTIONS, **vidavo** HEALTH TELEMATICS, **viva!**, **VoiceWeb**, **Wadja™**, **client trust** Ζητήματα Τεχνολογίας Αναβάθμισης, **cytech** mobile solutions, **EXODUS**, **QUBITEQ**
- AD&PR LAB** Panionios University, Athens, Greece, **ELTRUN** ΕΠΙΧΕΙΡΗΣΙΑΚΗ ΗΛΕΚΤΡΟΝΙΚΗ ΕΜΠΡΟΣΩΠ ΚΑΙ ΕΠΕΞΕΡΓΑΣΙΑ ΟΙΚΟΝΟΜΙΚΟ ΠΛΑΝΗΤΙΣΤΗΜΙΟ ΑΔΗΜΟΝΙΩΝ, **H+S** TECHNOLOGY SOLUTIONS, **icon platforms**, **innofitics** High-Speed Speech Recognition, **locotel** ..telecoms in motion!
- mobics**, **M-STAT** mobile solutions, **NOVELTECH** ΑΝΑΒΑΘΜΙΣΗ ΠΡΩΤΗΣ ΠΡΟΣΒΑΣΗΣ, **OBRELA** SECURITY INDUSTRIES
- Regate**, **SAP**, **SIGMA SOLUTIONS** ΕΠΙΧΕΙΡΗΣΙΑΚΑ ΣΥΣΤΗΜΑΤΑ ΠΡΩΤΗΣ ΤΕΧΝΟΛΟΓΙΑΣ, **TELENAVIS**
- Demokritos** National Centre for Scientific Research, **Think Silicon**, **TREBBLE**, **viva payments.com**
- Weknow!** IT CONSULTANTS, **χρυσός οδηγός**



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# HAMAC Partners

## Market Key Players

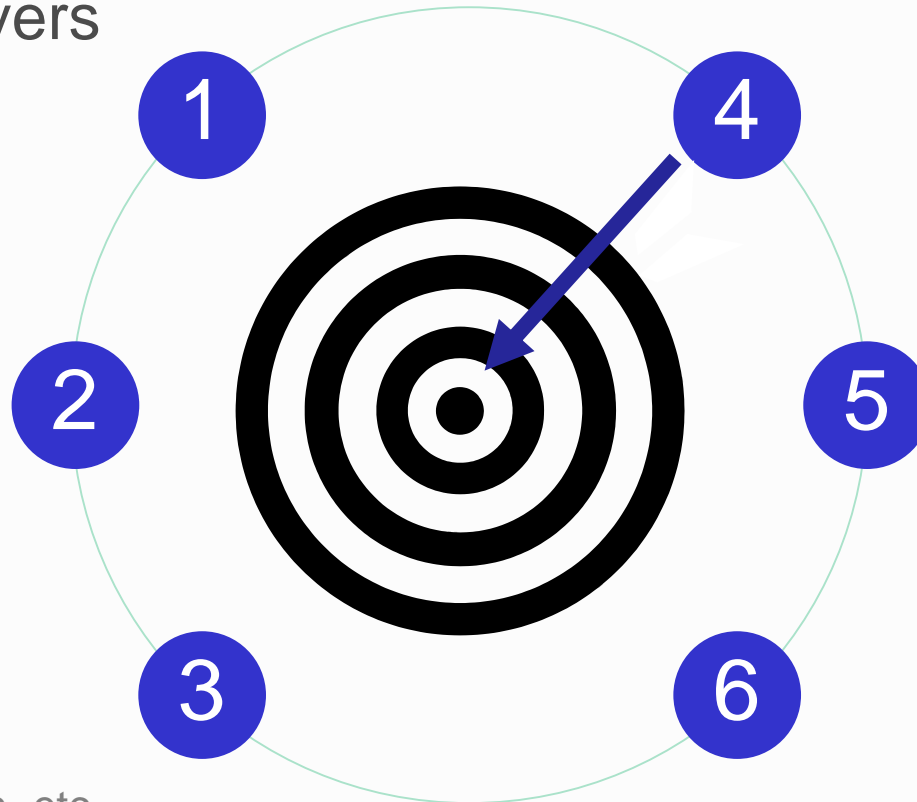
Banks – Telcos –  
Mobile Vendors

## Institutional

Enterprise Greece,  
Municipality of Athens,  
Attica Prefecture

## Chambers

Greek- American,  
Chinese, German, etc



## Academic

AUEB, ELTRUN,  
Piraeus University  
etc

## Associations

Σynergies, GRECA,  
SEV, IPE,  
SEPE Coralia,  
etc

## Industries

Shipping,  
Logistics,  
Tourism,  
etc



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# HAMAC Objectives

Growing the  
ecosystem

Going global

Access to  
capital

Enhancing  
innovation and  
entrepreneurship  
policies



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# HAMAC Benefits

1

Networking with  
Ecosystem

2

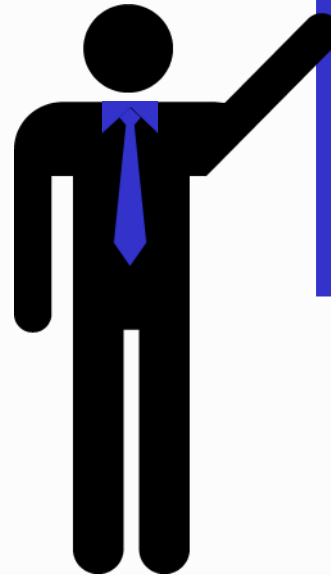
Advisory - Business  
Development,  
Commercial, IT

3

Insights - Partnership  
opportunities among  
HAMAC members

4

Funding



5

Solid & On-time  
information about  
ecosystem activities /  
events.

6

Cost-efficient  
participation in big  
conferences(local &  
international)



## Activities already successful

1

Technology Helps Society

---

2

miniMBA - training & coaching

---

3

Gate to contact VCs

---

4

ICT Conferences (e.g. Infocom, IOT, Smart Cities Conferences, Εφαρμογιάδα, Mobile Excellence Awards, eBusiness Forum, AIA (Digital Gate Challenge) etc)





## Planned for 2018

1

Vertical Markets Events  
(Shipping - Tourism - Municipalities)

---

2

Developers Certifications - Workshops

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3

Events with Associations (ΙΠΕ – Synergies)

---

4

Work Teams to practice specific skills, but also improve the ones you lack of



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# Hellenic Mobile Cluster



a **competitive**, **globally**, cluster  
which will contribute  
to smart, sustainable, extroverted  
development of its members  
and all actors of the broader  
**ecosystem**



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# Greece @MWC Barcelona





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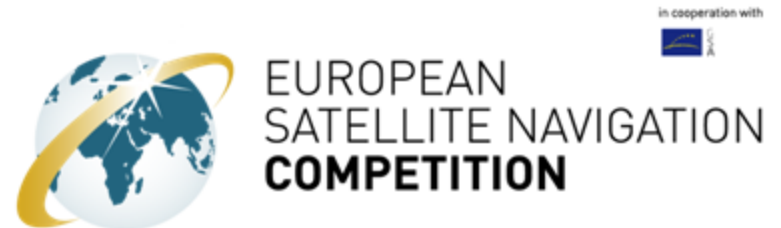
# Greece @MWC Americas 2017





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# Business – R&D Projects





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# Greek space challenge winners



EUROPEAN  
SATELLITE NAVIGATION  
**COMPETITION 2014**



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# Mobile mini MBA

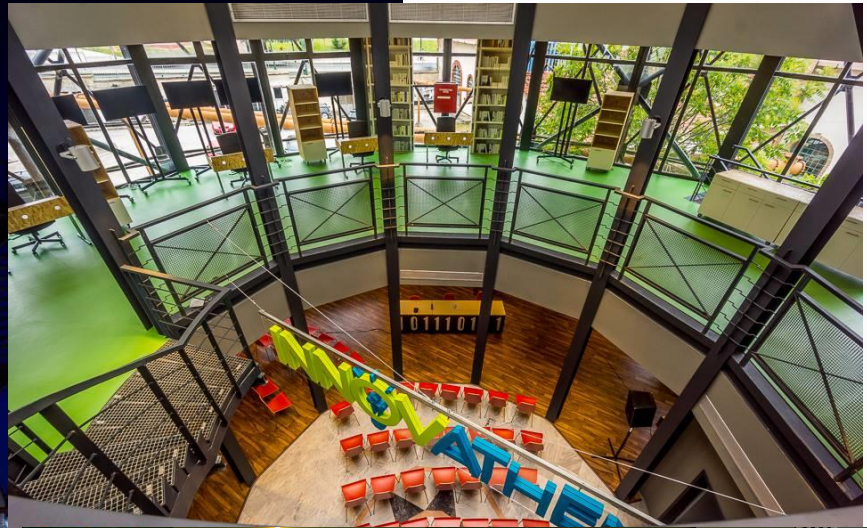
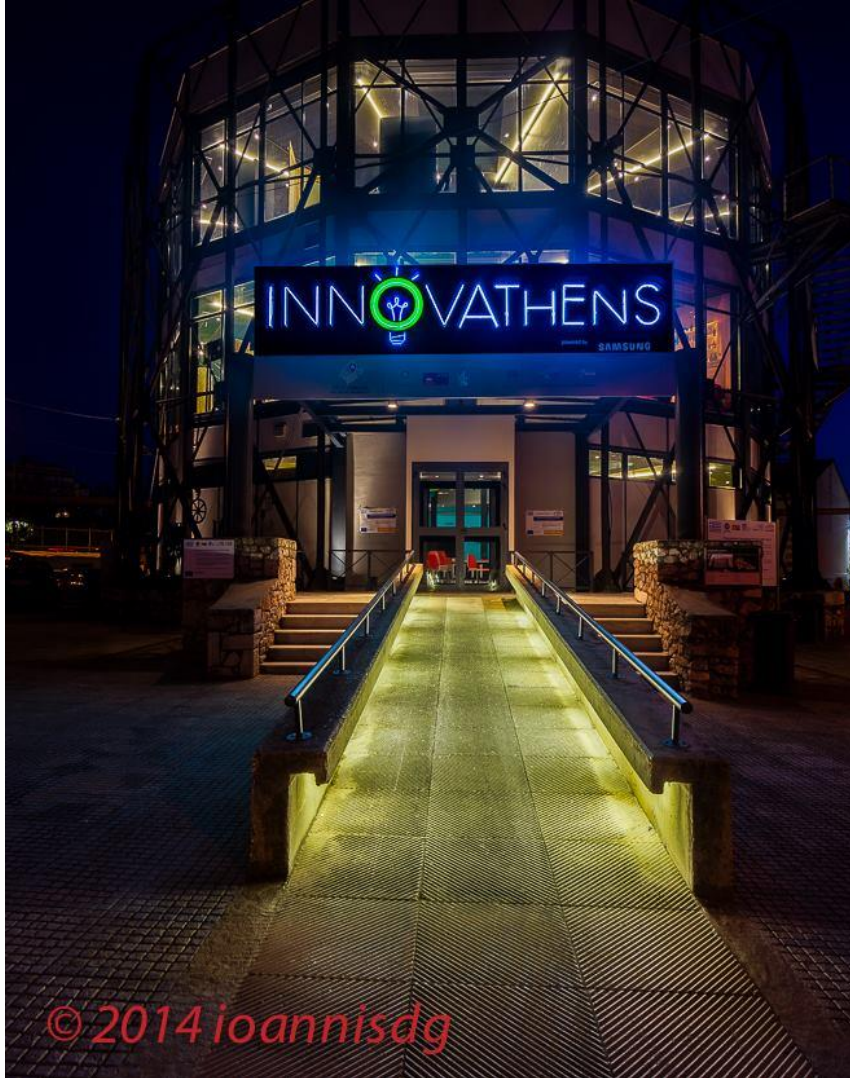


A HAMAC initiative, in cooperation with ELTRUN, Samsung Hellas and INNOVATHENS powered by Samsung



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# INNOVATHENS - Synergies







1. CENTAUR ([www.centaurek.com](http://www.centaurek.com)) – [sotiris@centaurtek.com](mailto:sotiris@centaurtek.com)
2. COMBOX ([www.protonyx.com](http://www.protonyx.com)) – [pkonstantinou@protonyx.com](mailto:pkonstantinou@protonyx.com)
3. DANAOS MANAGEMENT CONSULTANTS (<http://web2.danaos.gr/>) - [noel@noel.com](mailto:noel@noel.com)
4. METIS CYBERTECH ([www.metis.tech](http://www.metis.tech)) - [mike.konstantinidis@metis.tech](mailto:mike.konstantinidis@metis.tech)
5. MOTIVIAN ([www.motivian.com](http://www.motivian.com)) – [nkarapan@motivian.com](mailto:nkarapan@motivian.com)
6. NABLE ([www.nablesolutions.com](http://www.nablesolutions.com)) - [sotiriosmetaxas@nablesolutions.com](mailto:sotiriosmetaxas@nablesolutions.com)
7. PROPULSION ANALYTICS ([propulsionanalytics.com](http://propulsionanalytics.com)) [a.simeonidis@propulsionanalytics.com](mailto:a.simeonidis@propulsionanalytics.com)
8. SETEL HELLAS (<http://www.setel-group.com/>) – [n.dimakis@setel-group.com](mailto:n.dimakis@setel-group.com)
9. FORTH CRS ([www.forthcrs.com](http://www.forthcrs.com)) – [giorgos.papanastasiou@forthcrs.com](mailto:giorgos.papanastasiou@forthcrs.com)
10. VIDA VO ([www.vidavo.eu](http://www.vidavo.eu)) – [it@vidavo.eu](mailto:it@vidavo.eu)



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# Thank you!

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6<sup>th</sup> Ship Operating Cost Presentation  
December 5, 2017