



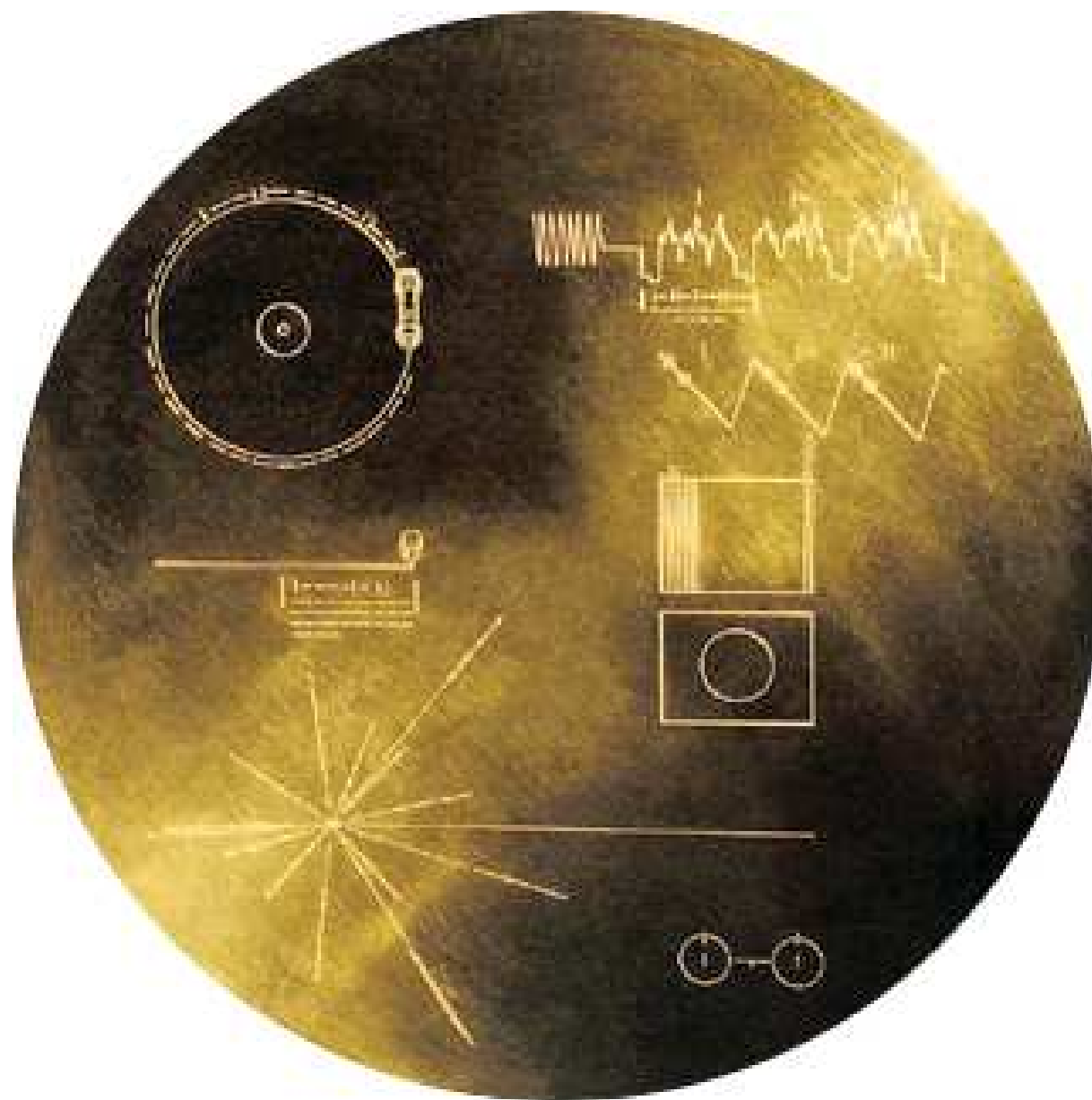
Work or Play in the Near Future?

7D Collaborative Work Environments

Jim Novack
MODPROD 2017
Feb. 7, 2017



TALENT SWARM



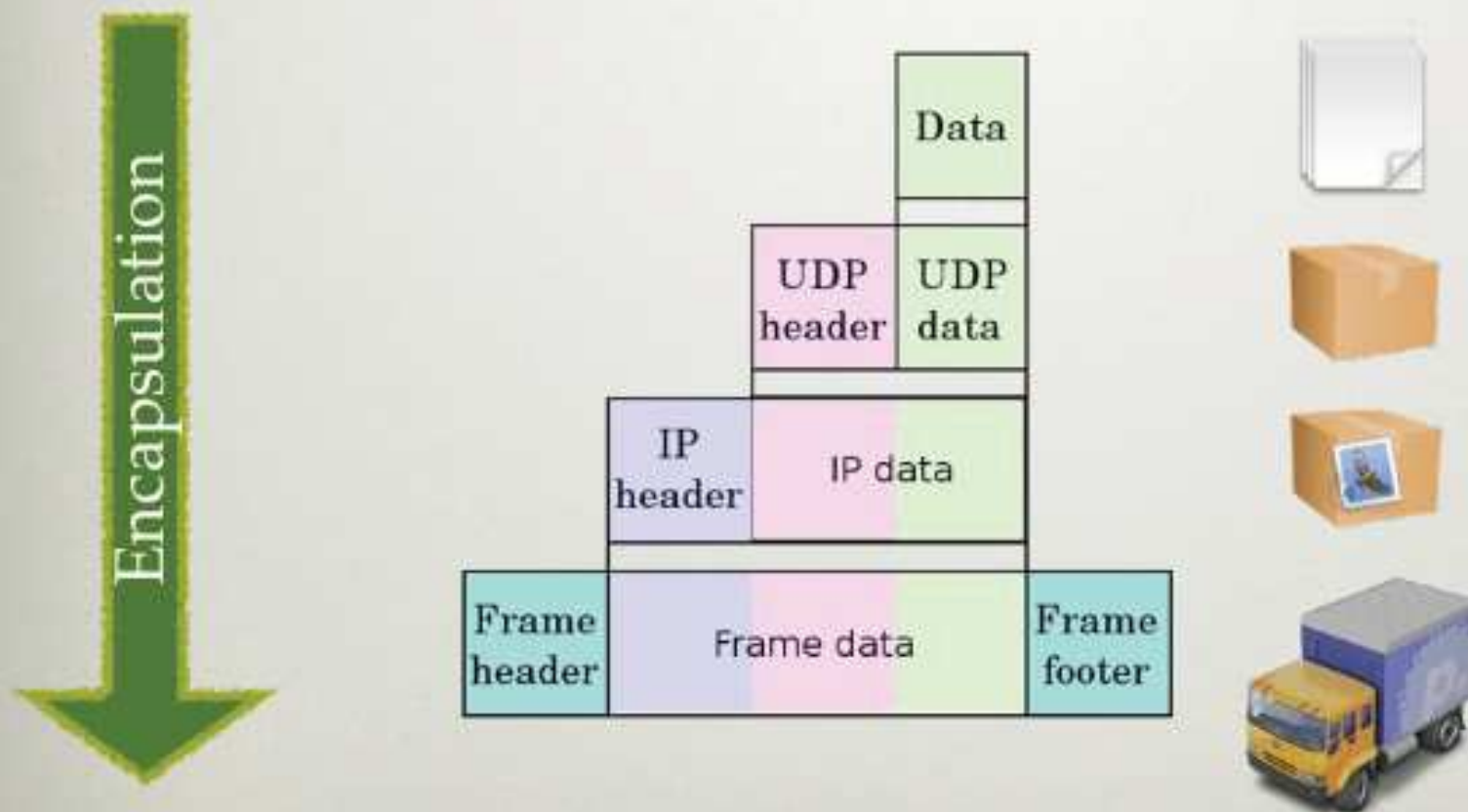


TALENT SWARM



TCP/IP MODEL AS FEDEX

Data Encapsulation is
How data is packaged and sent



“Mash” or Mix of Videogames, Big Data and Telecom



7D Sentient, Self-Diagnosing systems with streams of data from IoT that poll other similar parts for prognostic maintenance or recall (Jet Engine, GE Predix®)



6D “Smart” Objects IoT (including humans) with profound details about each object for maintenance and service throughout entire lifecycle (PLM)

5D Cost



5D Objects have discrete identity so that logistics, and pricing for procurement, Block Chain



4D Time Element, animated or in real time



3D Geometry, lines, circles, volumes

ID: DF299



MARTIN
AB Class operat
DF299

File Settings View Help

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I have received an error message in the AB4 sector: 4
from the RDT665 machine.
There is an error in +8978SX valve. It is
necessary to replace it for a +8923790D valve.

▶ I'm on my way

Thank you ◀

Private

General

Send

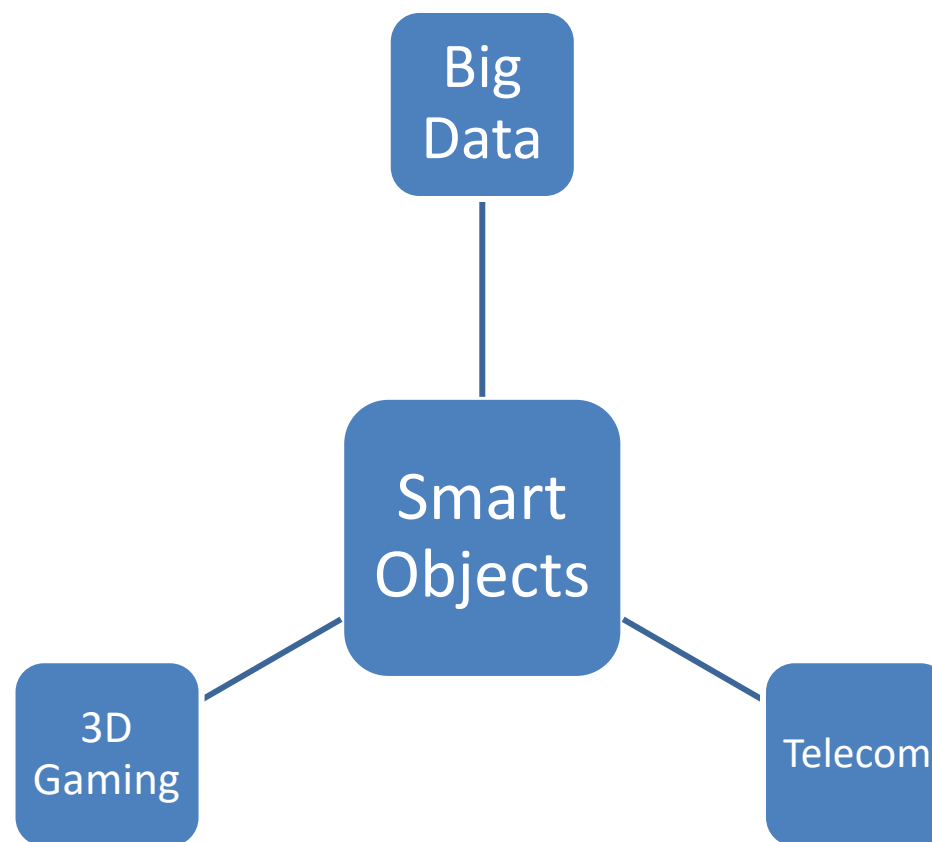
CONTACT

BACK

DATA TSUNAMI

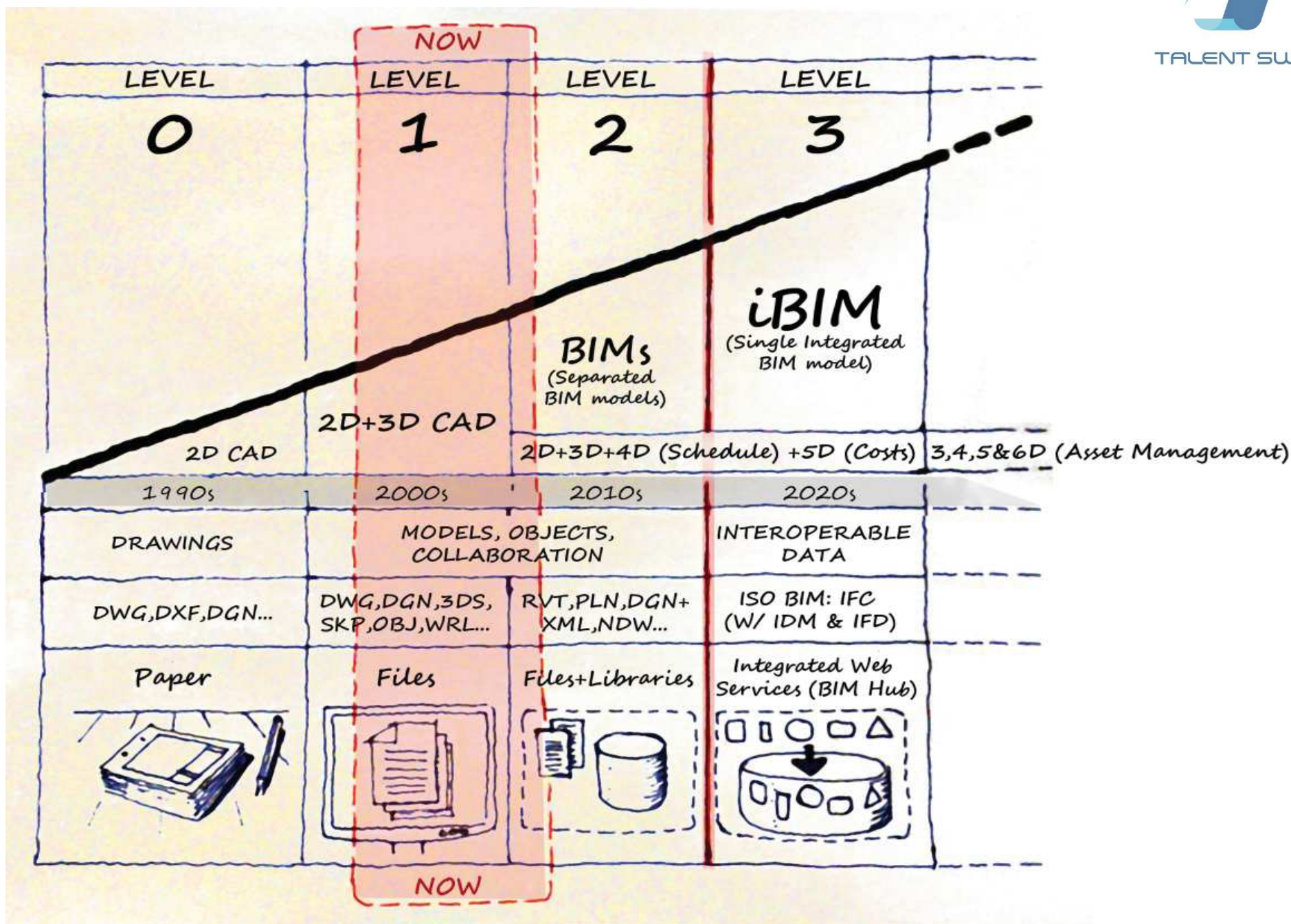
From inception to decommission, every plant, building and aircraft is generating increasing amounts of data in real time. Data that can be used to manage, maintain, optimize the operational efficiency of the facility and equipment.

All businesses will be data businesses by 2022





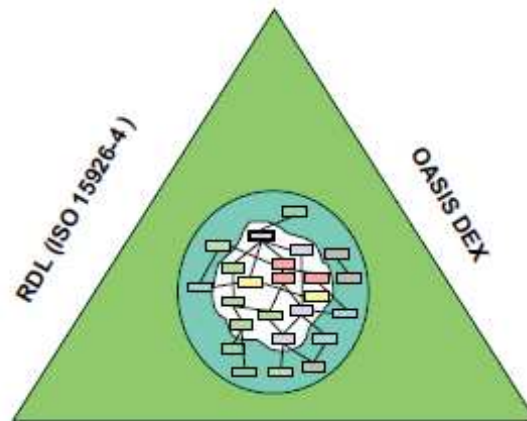
TALENT SWARM



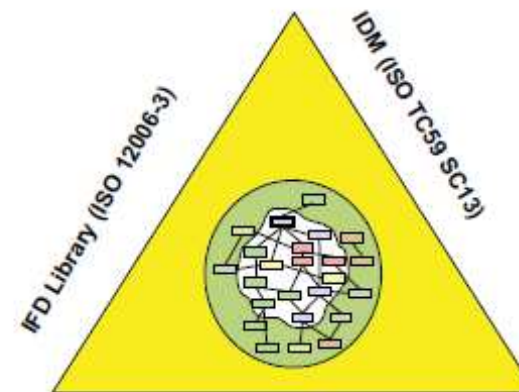


TALENT SWARM

Aeronautics & Space



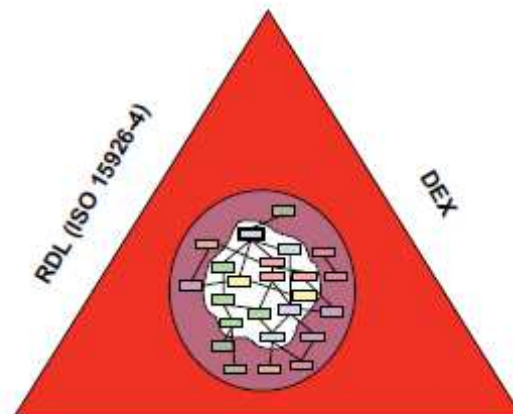
ISO 10303-203, 209, 212, 214, 239,
ASD 9300-110



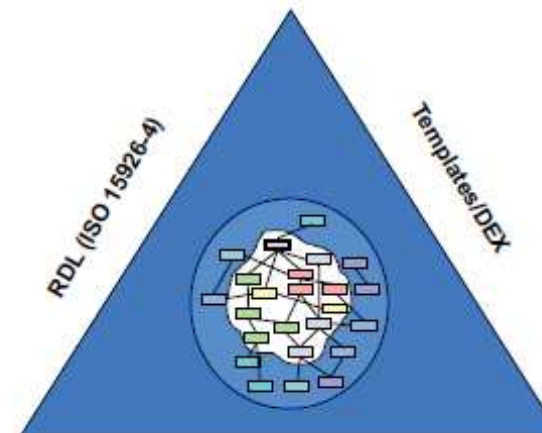
IFC (ISO 16739)

**Built Environment
(AEC-BIM)**

Defense



PLCS (ISO 10303-239),
ASD/AIA S1000D,
ADL SCORM



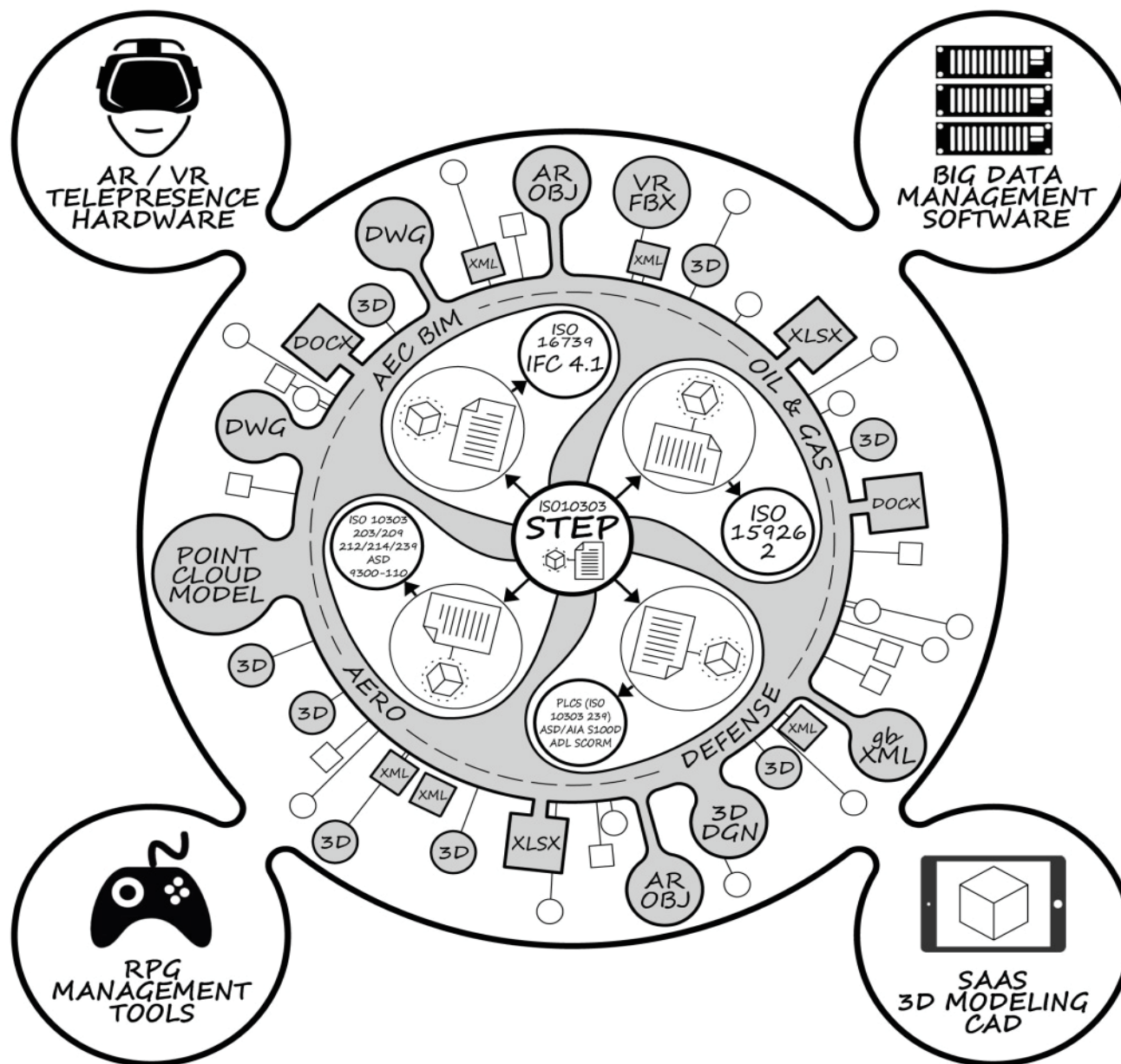
ISO 15926-2

Oil & Gas

- Built & Environment (AEC-BIM): **IFC (ISO 16739)**
- Oil & Gas: **ISO 15926 – 2**
- Aeronautics & Space: **ISO 10303 – 203, 209, 212, 214, 239**
- Defense: **ISO 10303 – 239 (PCLS)**



TALENT SWARM



This is not just theory, here is a sample of a test done with Intergraph and Amazon's AWS cloud

Smart 3D → Big Data in XML → Collaboration Platforms (Unity)



TALENT SWARM



mongoDB®





TALENT SWARM

BIM6D



bimobject

aconex

TECHNOLOGY, PROCESS AND PEOPLE

People Process and Technology – is how this is normally expressed. Yet what we have found is that People are the last aspect to be considered or optimized

Yet why are they the last thing to be considered? Maybe because people are perceived as flexible and resources can be adjusted in terms of time, location, and skill levels.

However, the wrong people can make decisions than can lead to high inefficiencies or time and cost overruns.

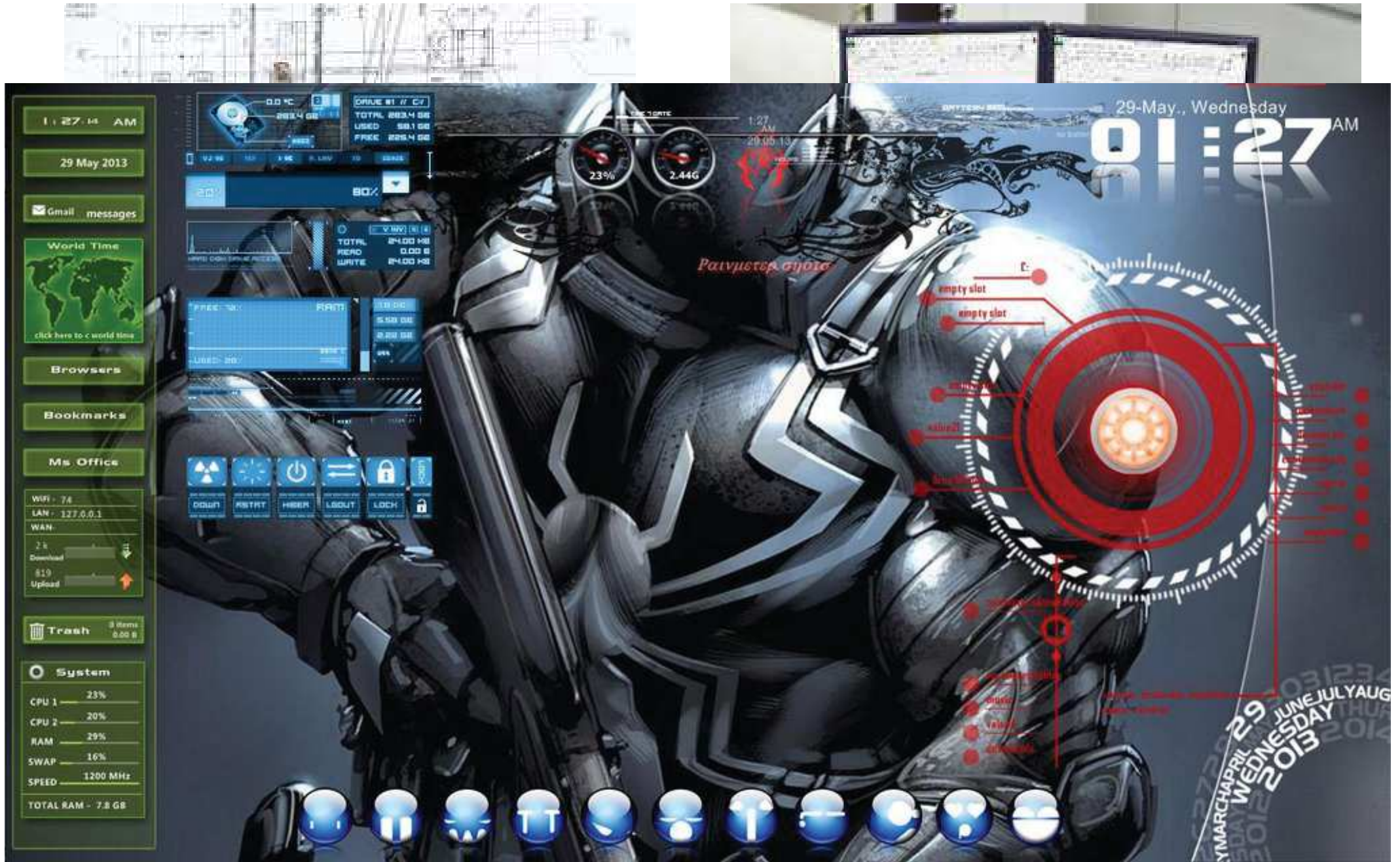
Yet this is also creates a weakness in project optimization, as people can not be properly measured or predicted accurately. Until now...

REUTERS

COMMODITIES | Tue Jan 3,
2017 | 1:13pm EST

U.S. refiners face severe
labor shortage for deferred
maintenance

Article



Working together is the key: ***Collaboration***



TALENT SWARM



PEOPLE-CENTRIC TECHNOLOGY

Talent Swarm was born out of the need to provide correctly skilled engineering professionals to the project location at a specific time for a set price.

People are far more variable than machines and cannot be expected to be infinitely flexible like materials. Therefore in a perfectly optimized plant, human factors create variability and potential inefficiencies.

How can technology be applied to smooth out the uneven human patterns? Years of experience in providing highly qualified engineering professionals on an outsourcing basis, refinement and iterating has given rise to the multi-faceted Talent Swarm solution.



TALENT SWARM



Creating the Perfect Avatar with the VITUS 3D

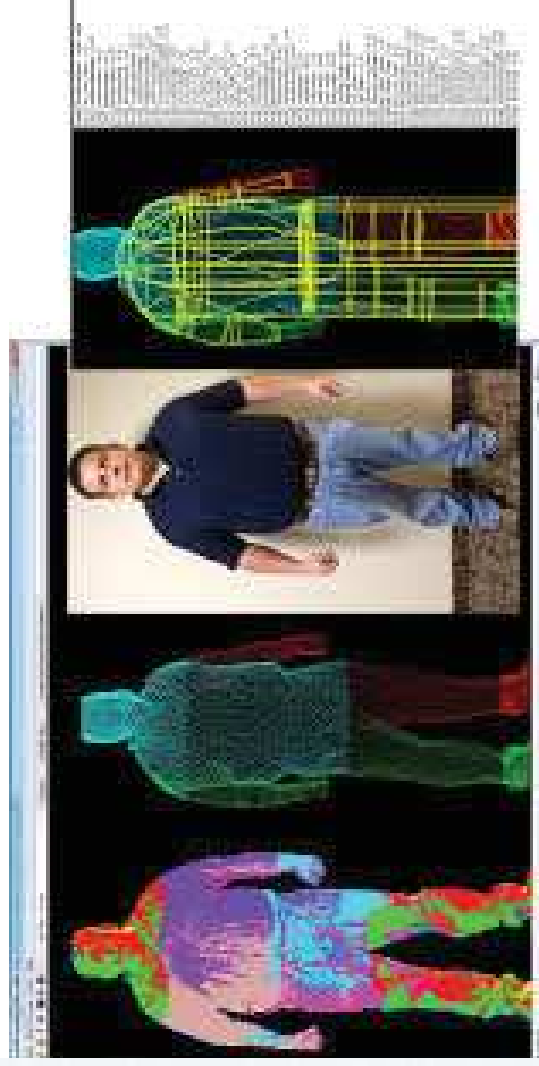
Today's computer animation techniques are enabling virtual realities with an increasingly realistic look and feel. With the VITUS BODYSCAN 3D body scanner, VITRONIC is offering a technology that allows anyone to integrate themselves quickly and easily into digital worlds, video and film productions as a perfect 3D image.



The VITUS BODYSCAN measures the entire body in less than 6 to 10 seconds. The laser-based 3D measuring process is highly accurate and reliable. Even textures such as hair color and the color of clothing can be captured and included with the scanner.



TALENT SWARM



GLOBAL COLLABORATIVE
VIRTUAL ENVIRONMENT

OPERATOR OR ENGINEER
WITH VIRTUAL REALITY
GLASSES

COLLABORATIVE WORK ENVIRONMENT

Talent Swarm® proposes a Collaborative Work Environment (CWE) that combines engineering design software with a super realistic 3D gaming-like environment, allowing the use of a global talent pool and an integrated catalog of parts, from design to facilities management for the petrochemical, industrial, aeronautical industries and large building construction.

VIRTUAL REALITY

AUGMENTED REALITY



TALENT SWARM

7D Collaborative Work Environment

Marketplace - For Equipment Suppliers and Qualified Engineering and Construction Talent.

Collaborative Work Environment - That allows remote designers and field workers to communicate in real-time

2-Way Connections to the major 3D Design Suites from Intergraph, Siemens, AutoDesk, AVEVA, Bentley & Dassault

*Procurement and Construction/Assembly Platform
Visually-oriented and anticipating the 21st century workers*

*“Cradle to Grave” Facilities Management
Complete life-log from initial design, construction, start-up, operation, maintenance and dismantling for a lower total cost of ownership from prognostic maintenance with future AI*

“Mash” or Mix of Videogames, Big Data and Telecom

- **Not reinventing the wheel, use existing standards and import existing designs**
- **Smart 3D → Big Data in XML → Collaboration Platform, Web Graphics & Unity**
- **Suppliers create catalogs of parts with characteristics and behaviors (Modelica?)**
- **“Pick and Place” like Lego®**
- **We have partnered with 100+ person programming company specializing in Big Data**
- **Also work with 2 separate Videogame houses, in Madrid and Valencia**

Who are we?

JIM NOVACK TALENT SWARM

Talent Swarm® is a spin-out of Dynatec that has 40 years technical experience providing skilled engineering and design resources to petrochemical, nuclear and power projects worldwide. We have ready access to large engineering and procurement companies.

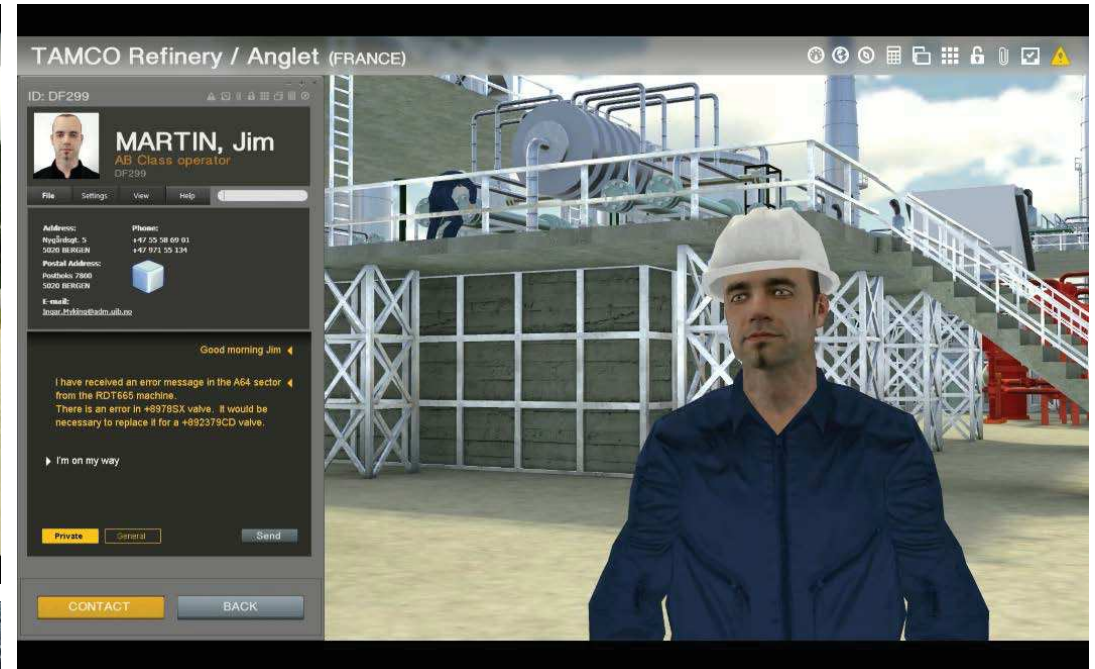
Nebrija
Universidad

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www.Dynatec.es



Our "Ask": Questions & Answers



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