Session 209

Blending xAPI Analytics, DITA, and BPM for Next-gen Performance Support

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If your People are Lost in Process, Skillaware™ is Your Process GPS

Blending xAPI Analytics, Robotic DITA Content Generation & BPMN Process Management for next-gen Performance Support

A sedApta Group Company
1. **The Need**: How is Industrial IT changing and Why we need new generation support systems to better engage and onboard new workforce? (15 min)

2. **The Solution**: Extending EPSS Systems with BPMN Business Process Orchestration, DITA Robotic Content Generation & XAPI Learning & Process Analytics Interoperability (15 min)

3. The Extended Skillaware O.S.A. ™ Ecosystem

4. **Skillaware OSA™ Video Case** in Supply Chain Management (5 mins)

5. Q&A (10 mins)

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Fabrizio Cardinali  
CEO Skillaware EPSS  
SVP O.S.A. Ecosystem Business Development, sedApta Group

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**Show Me**: Select to see Skillaware EPSS Intro for Manufacturing IT (5 minutes)
Premise

Industrial IT Heritage & Knowledge

Smarter training for smarter manufacturing
sedApta Group Key Numbers

10 Offices

400+ Active Customers

15+ Industries & Practices

500+ successful Supply Chain & MoM Projects

50+ Specialists in R&D Team

350+ Employees

250+ Supply Chain and MoM Technical Specialists

30M€+ Aggregated Turnover

World wide delivery

Global network of partners

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Our team’s depth of experience across diverse manufacturing sectors gives us an understanding of the industry-specific challenges, standards and solutions. Our customers could not find this expertise at any other company in the world.
sedApta Group aggregates +250 leading experts in all main Manufacturing and Industrial IT Platforms in the marketplace from PLM, MES and SOP Suites to CRM, ERP, LMS platforms and beyond.
sedApta has recently opened an innovation Lab and start up incubator in the Silence Bay of Sestri Levante, one of Europe’s nicest locations, North West Italian Riviera between Portofino and Cinque Terre, to address the increasing needs for new technologies for workforce training, support and engagement during digital transformation at the dawn of the 4th industrial revolution, that of cyber physical manufacturing, 3d printing and IoT.
1. The Need

How is Industrial IT changing and Why it needs new generation support systems to engage its workforces?
Crossing the Manufacturing IT Skills Chasm.
3 1/2 ML Manufacturing Jobs over the next decade of which 2 unfilled

84% of execs agree there is a skill shortage of which 70% in IT Skills

every 1 Manufacturing Job creates 2.5 jobs in local services
How can we support CHANGE... during DIGITAL disruption?
By 2025 the Millennials will drive +60% of the Industry.
The People Factor
On boarding & Engaging People directly @ the Workplace

70% On-the-job Experience

20% Informal Learning

10% Formal Learning

Source: Charles Jennings, former CLO of Reuters
Adding Robotic Process Automation as a Pillar of Transformation

100 Million
The number of global knowledge workers who could be impacted by RPA by 2025.
Using Data as a Sixth Sense to relate Training to Business Performance
1. The Solution

Extending electronic performance support platforms with BPMN, DITA and XAPI interoperability.
How is Industrial IT changing?
From Data Driven Silos to Process Driven Orchestration

From Data Driven Siloed IT Platforms & Supply Chains...

...to Demand Driven Value Networks and Process Ecosystem

Source: Gartner
How is Industrial IT changing?
New Personas, Skills & Technologies emerge during digital transformation
BPMN 2.0
From Data Driven Silos to Process Driven Ecosystems

Source: http://www.omg.org/

Process Pool

Process Lane 1

Process Lane 2

Process Lane 3

Multiple Process Roles (samples)

Multiple Process Applications (samples)

Corporate Planner

Plant Planner

Factory Scheduler
How is IT Training Changing?
From one off employment to continuous recruitment, upskilling, engagement & onboarding

Transforming businesses towards digital processes usually triggers the well known “Change Resistance Curve”\(^3\).

But during change we cannot leave anyone behind... it is important to understand the impact that the change will have on user acceptance and engagement into new systems.

The goal of new generation performance support systems such as Skillaware is to help make the transition as effective and painless as possible.

\(^3\) Source: http://www.businessballs.com/personalchangeprocess.htm
Why do we need Skillaware?

Aren’t our eLearning & classroom programs enough?

It is well known\(^4\) that when teaching repetitive and standard operational procedures with traditional methods, the average user forgets:

- 42% of information 20 minutes after training
- 67% of information 24 hours after training
- 79% of information 1 month after training

We know that knowledge retention is dramatically increased by means of:

- Continuous repetitions whilst executing tasks @ the workplace
- Contextualized new information & knowledge delivery whilst taking decisions @ the workplace
For such reason it is emerging that 10:20:70 is the ideal training blending for your digital transformation journey.

Within a 10:20:70 model the mix should be made up of:

- 10% formal training
- 20% coaching
- 70% workplace Performance Support which may be delivered by new generation tools which are:
  - Always available at the workplace
  - While you are performing work tasks
  - Available «at the moment of need»
Extending EPSS with BOTs & RPA (Robotic Process Automation) 1/2

Five factors driving the rapid advent of RPA according to KPMG studies¹,²:

1. The shrinking talent pool due to global demographic trends
2. Escalating workforce costs in emerging markets
3. Expanding capabilities of robotic technologies
4. The Internet of Things making devices smarter and reducing the need for human intervention
5. Increasing influence of platform-centric cloud service providers

¹Bots in the back office: The coming wave of digital workers
²Robotic Revolution – separating hype from reality
3 maturity levels of BOTS

1. Automated Guidance with Screen Scraping, Workflowing and Rule based reasoning
2. Adding Cognitive Technologies
3. Adding Distributed AI
3 Main LIMITS of SCORM
1. No Intra Topic Structuring
2. No Fine Grain Tracking
3. No Intelligence

3 Main LIMITS of Docbook
1. Bulky Schema
2. Book oriented
3. Top Down structuring

This is What we Had...
A DITA topic is a titled unit of information that can be understood in isolation and used in multiple contexts. It should be short enough to address a single subject or answer a single question but long enough to make sense on its own and be authored as a self-contained unit.

A DITA map is a documents that organize topics and other resources into structured collections of information. DITA maps specify hierarchy and the relationships among the topics; they also provide the context in which keys are defined and resolved.

Source:
http://www.omg.org/
3 Main Advantages of DITA as a BOT generation technology:

1. Object Oriented Structuring & linking
2. Inheritance & Specialization
3. Dynamic output generation

This is What we could have ...
To be effective during transformation you must continuously monitor workforce performances and relate them to process KPIs, linking training efficacy & effectiveness to overall company appraisal and improvement.

For this you must be capable to:

- Measure Process /Production performance
- Measure People performance
- Relate one to the other
...towards continuous improvement & appraisal.

CMMI™ SCAMPI™ SCOR™ DCOR™ ISA95™ ISO22400™

Increasing aggregation
Audience:
CFO, CEO
Plant Accounting,
Finance
Plant Management,
Operations
Operators, Supervisors,
Quality, Engineers,
Technicians
External
Investors & Creditors
Internal
Strategic
Business Planning
Plant floor sensors, Operator, and machine to machine interface

Measuring & Relating Process & Workforce KPI Towards Continuous Improvement
Smarter Training for smarter manufacturing

Source: https://www.adlnet.gov/
The nextgen OSA™ Ecosystem

Adding BPMN Business Process Management, DITA Robotic Process Automation & XAPI Analytics to the Skillaware EPSS
If you are facing software maintenance, training & support challenges during your digital transformation journey, Skillaware™ may help you drive your workforce home just like a car’s GPS helps get your family home quickly and safely!

Just in time
Just enough
Just when needed
Digital Workforce Guidance
Directly at the Workplace

www.skillaware.com

If Your People are Lost in Process
Skillaware™ is Your Software GPS

Show Me: Select to read Gartner’s blog post announcing Skillaware EPSS as Cool Vendor 2016
Show Me: Select to see Skillaware EPSS Intro for Manufacturing IT (5 minutes)
Skillaware™: Your Software GPS

Skillaware™ automatically captures the experience of your expert user personnel and transfers it to novice end users by means of automatically generated:

- Technical Documentation & Multi-Language Videos
- GPS Software Text-to-Speech Navigation Guides (SkillAgents™)
- Robotic Process Automation BOTs (SkillBots™)

www.skillaware.com
The O.S.A. ™ Ecosystem is based on Open Standards Interoperability specs empowering integration also with any 3rd party BI-BPMN-DITA alternative
The new O.S.A. Ecosystem extensions for the Skillaware EPSS

Skillaware™ is now being extended with 2 optional suites for:

- Business Process Orchestration
- Business Process & Workforce learning Analytics
- Electronic Performance Support Suite
Advanced BPMN 2.0 integration with internal BPM Suite or with any 3rd party BPM platform based on a patented BPMN conversion to SKILLPATHS™ structures (Skillaware PROCESSES, APPLICATIONS & Tasks Human Skills) with automatic:

- BPMN to Folder Structure conversion
- GUID Identification
- Role Assignment
- Hyper Structure Management (drag, drop, copy, paste, migrate links....)
- Cross EPSS-BPMN notification of Field/String Values
- Automatic BPMN to EPSS launch mechanisms
Extending Skillaware EPSS with RPA & BOTs

Skillaware maturity roadmap on RPA:

- **Level 1**: SkillEditor™ robotically generating Multimedia and Multiformat contents and DITA XML output

- **Level 2**: SkillAgents™ performance assistants with text to speech multilingual guidance & SkillBOTS™ Rule Based Reasoning Agents with automated Screen Scraping & Workflowing capabilities:

- **Level 3**: Adding AI like reasoning with Microsoft Cortana™ interfacing
Advanced XAPI Tracking & Reporting integration between Skillaware and BI/LA Tools with

- Widget based Integration
- XAPI tracking of all user activities and specific entry screen scraping values when using EPSS
- BI tracking of any other Data Sources (i.e. Process KPIs)
- Multi Source Reporting
The Skillaware extended O.S.A™ Ecosystem
Open Standards Oriented Architecture

Data Analyst
KPI Analyst
KPI Reporter
SSO/User Access
Process & Task Repository
Tasks and Processes Catalogues
Process Modeler
Process Orchestrator
Process Monitor
Business Process Analyst
Training Manager

Workforce Community
SkillsPortal
SkillAgents
SkillEditor
SkillBoard

API
Experience
DITA
BPMN

Skillaware
Support

Open Standards Oriented Architecture

Process Orchestrator
Business Process Analyst
Training Manager

Skillaware API
SkillBoard
SkillAgents
SkillEditor
KPI Analyst
KPI Reporter
SSO/User Access
Process & Task Repository
Tasks and Processes Catalogues
Process Modeler
Process Orchestrator
Process Monitor

The Skillaware extended O.S.A™ Ecosystem
Open Standards Oriented Architecture
Click on icon to view a video case presenting the Skillaware O.S.A. Ecosystem extension within Supply Chain Management

(For password pls mail request at info@skillaware.com)
"Rather than learning how to solve that, shouldn't we be learning how to operate software that can solve that problem?"