

Beware:
Extreme Software



Speakers



Michael Ford

Sr. Director Emerging Industry Strategy



Alexandru Cascatau

Sales Applications Engineer

What Is “Extreme” Software?

Different Approach, Different Results:

- Different software solution approaches
- Ways of creating value from data
- Cost-effective data acquisition methods
- Data modelling strategies
- Integrity and security issues
- Flexibility to adapt to new situations
- Dependency on middleware and customization
- Coding requirements



We Are Not All Made Of Money!

What Is “Extreme” Software?

Different Solutions, Different Results:

- Discovering the optimum balance
- “Sticker shock” when buying software
- Daily, medium and long-term cost of ownership
- Sustainability of solutions, technology evolution
- Taking on the responsibility

Extreme Software: In-House Software Development



Costs:

- Initially manageable, internal
- Requires key skills

Values:

- Own data model, specific to need
- Focus on immediate goals

Risks:

- No external dependencies

*“Seemed like a good idea
at the time”*

Costs:

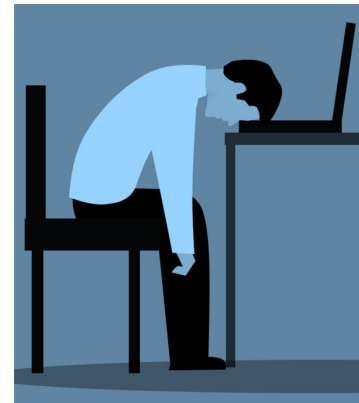
- Indirect fixed-cost burden
- Escalating due to inefficiencies

Values:

- Limited expansion due to fixed data model
- Confusing parallel requirements

Risks:

- Self-coding - technology obsolescence
- Unconnected point solutions
- Skill dependencies
- Key person retention
- “Untouchable” systems
- Increasing compromise



Extreme Software: Commercially Dominant Solutions



Costs:

- A simple quote and install process

Values:

- We cover everything you want

Risks:

- A corporate global partner

“The roadmap and cost model claims did not match, now we are stuck”

Costs:

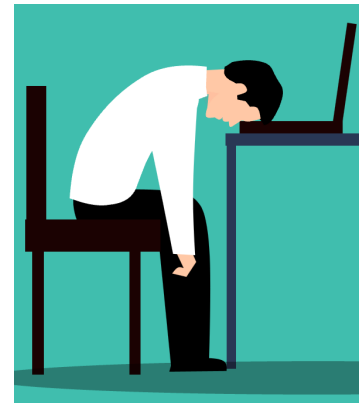
- Almost always, huge unexpected costs

Values:

- Individual requirements are not supported
- Very limited flexibility, without customization
- Integration is not as slick as it seems

Risks:

- Locked into proprietary data formats
- Unable to connect other solutions
- Spiraling costs as needs evolve
- Huge cost of change



Extreme Software: App-Based Platforms



Costs:

- Very competitive, “apps on a phone”

Values:

- You can get everything you want
- No need for a “big ticket” MES

Risks:

- No or low-code solutions!

“The simplistic approach appeared fine, until we realized we were being both tied- in, and we had to do a lot of the work ourselves”

Costs:

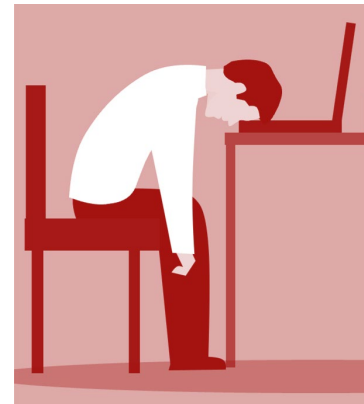
- Significant development of own data model
- Very significant connectivity costs

Values:

- Too much flexibility, lacking know-how
- “Apps” do not follow the same data model

Risks:

- Budget uncertainty
- Spiraling costs as needs evolve
- Frequent data model reinvention
- Reliability concerns
- Security and dependency issues
- Self coding or 3rd party support



Getting The Right Balance: Aegis

About Us:

- Experts in the industry for over 25 years
- Dedicated to MES our, singular business focus
- Differentiated expertise and technologies
- Promote Interoperability across the industry
- Helping create and promote next-gen industry standards
- Thought leadership for Smart Digital Manufacturing
- Supporting every sector and tier of discrete assembly efficiently



Getting The Right Balance: Aegis

Our Mission:

- Off the shelf, secure MES software
- Single platform, IIoT-based
- No 3rd party dependencies
- Flexibility: customers configure, not code
- Dependable, sustainable software automation
- Continuous support and technology evolution
- Rapid deployment and time to value



Getting The Right Balance: Aegis

Our Strategies:

- Clear pricing, without follow-on surprises
- Extensive interface library to devices and systems
- IIoT standards-based interface expansion
- Avoidance of middleware
- Minimized customization
- Open APIs for enhanced unique integrations
- Lowest cost of ownership in the industry
- Performance without compromise



Getting The Right Balance: Aegis

Our Values For You:

- Increased readiness, productivity, quality and flexibility
- Decreased material costs, lead times, fixed costs

Flexible Modules:

- CAD-driven, work instruction / machine data automation
- Automated to order execution management
- Automated Lean material management
- Comprehensive active quality management,
- Automated traceability and quality data collection
- Flexible manufacturing with Adaptive planning and MRO
- Performance enhancement through built-in analytics

FactoryLogix[®]



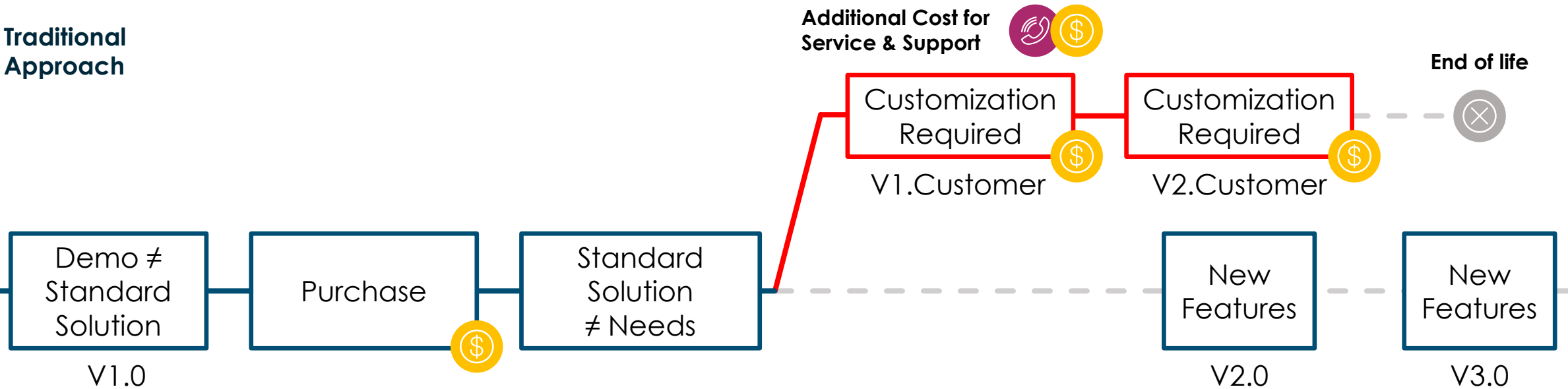
FactoryLogix[®]

Demonstration

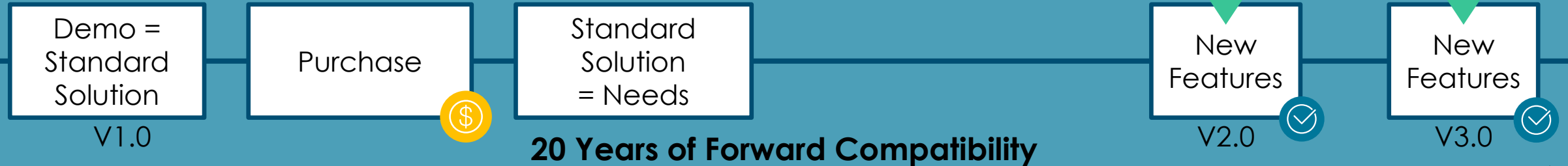
Alex Cascatau, Sales Applications Engineer

Unique Evolution Lifecycle: Single Code Base Value

Traditional Approach



AEGIS
FactoryLogix™



No-Code Approach To Engineering And NPI

Our solution takes a no-code approach to engineering. Defining a production process and the corresponding work instructions is an easy, visual task which enables engineers to focus on value-adding tasks and concepts.

Define Processes

Assembly	Assembly Revision	Process Revision	Process Description	Production Status
3D CAD Quality	Engine Block	1		Released for Produ...
Demo Assembly	1	1		Under Construction
3D CAD Quality	SAAB CAD	1		Under Construction
3D CAD Quality	SAAB PoC	3		Released for Produ...
Gerb	A	A		Released for Produ...
BMW ECU Controller	1	1		Under Construction
Axis Test	1	1		Under Construction
Robot Arm RBA-825	1	1	Changing torque tool requirements to add Tohnichi	Under Construction

Just-In-Time Reroutes

Name	Assembly	Process Rev	Units
------	----------	-------------	-------

Task Log

Type	Task	Customer	Assembly	Process Revision	Scheduled Start	Scheduled End
Operator Feedback	Work on operator feedback		3D CAD Quality - Light Pole	3D CAD Quality - Light Pole - 1	25-May-22	
Operator Feedback	Work on operator feedback	MotoDyne	Robot Arm RBA-825 - C	Robot Arm RBA-825 - C - 09	09-Jul-21	
Operator Feedback	Work on operator feedback	MotoDyne	Robot Arm RBA-825 - C	Robot Arm RBA-825 - C - 09	09-Jul-21	
Operator Feedback	Work on operator feedback	MotoDyne	Robot Arm RBA-825 - C	Robot Arm RBA-825 - C - 09	12-Jul-21	

Seamless Release To The Shop Floor

On the shop floor, everything has already been configured for maximum efficiency. The interface can be adapted to different stations, for people and machines individually. In most automated scenarios, data capture happens in the background.

The screenshot displays the FactoryLogix software interface. At the top, a 'Change Notices' window is open, showing a notice for 'Yangfeng Demo' with a description 'Barcode', start date '07-Jun-22', and expiration date '07-Jul-22'. The notice details are 'Changed robot arm colour. Please acknowledge.' Below this, there is a 'Completion Acknowledgement' checkbox and a prompt to 'Click the box to acknowledge completion'. In the center, a 'Success' dialog box with a blue header and white background displays the message: 'Product 'RBA-SN-003' Started Successfully'. The background interface shows a task list with instructions such as 'Scan Serial Number of Upper Arm' and 'Guide Upper Arm dual steel positioning pins through mounting holes 4 and 8 on Lower Arm'. A BOM table is visible at the bottom left, and a sidebar on the right contains 'Standards', 'Certification Required', 'Required Resources', and 'Personal Safety' sections. The bottom status bar shows: 'Unit: RBA-SN-003 | Assembly: Robot Arm RBA-825 - C | Operation: Upper Arm Assembly | Batch: WO-RBA-20200801 | Next Operation: Rotation Test | Current User: Aegis-Admin'.

Real-Time View Of Integrated Analytics

At the end of the process, data gets collected and saved in our single-source database. Analytics help us improve our workflow, analyze data and view it in real-time – from machines and workstations throughout the factory.

