S-Square

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CERTIFIED NMSDC MBE 2018

S-Square - LowCode/NoCode (LC/NC) Enabling Technology Presentation

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Current Challenges in Traditional Application Development

Long Development Timelines

- Custom development with standard SDLC processes
- Long incubation period before seeing a MVP
- Minor changes require long turn around time for design, build and testing.

High Capital Expenditure and Operating Costs

- Investment in Software platforms and Infrastructure for custom development
- Higher support costs due to diverse support requirements

Disparate Technology Landscape

- Multiple small projects using disparate technologies
- No uniform platform to manage small developments

Developer Shortages

- Developer shortages and skill-set challenges
- Multiple small productivity projects get deprioritized

6 Generations of Programming Languages

First generation (1GL) - machine-level programming language used to program first-generation computers
Examples: machine-level programming languages

Second generation (2GL) - assembly languages. Examples: Assembly

Third generation (3GL) - more machine-independent (portable) and more abstract therefore more programmer-friendly than previous generations of languages
Examples: Fortran, COBOL, BASIC, Pascal, C, C++, Perl, Python, Java, JavaScript, Ruby, PHP, C#

Fourth generation (4GL) - include support for database management, report generation, mathematical optimization, GUI development, or web development. Examples: ABAP, Unix Shell, SQL, PL/SQL, Oracle Reports, R

Fifth generation (5GL) - any programming language based on problem-solving using constraints given to the program to make the computer solve a given problem without the programmer, rather than using an algorithm written by a programmer. Examples: Prolog, OPS5, Mercury

Sixth generation (6GL) - programming language based on visual development. The overall umbrella term for these is "NoCode". Examples: Appian, WEM.io, Bubble.io

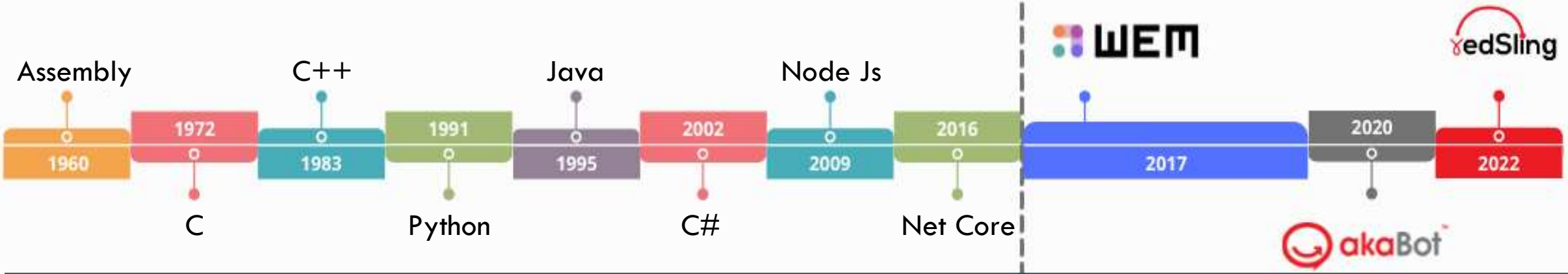
Reinventing Software Development

Traditional Coding

Requiring expensive, hard to retain code-linquists

No-Code

Empowering transforming support to employ business-knowledgeable techno-functional resources



Traditional computer languages require programmers to translate their thinking process into code built for the CPU and memory

Optimized for how we humans think. Converting natural thinking process into working software

Digital Transformation. Legacy Modernization. Business Velocity.

80%

COST REDUCTION

Empowers employing business knowledgeable (techno-functional) resources instead of costly, hard to retain code-linquists to build, deploy and maintain secure scalable enterprise-grade software.

10%

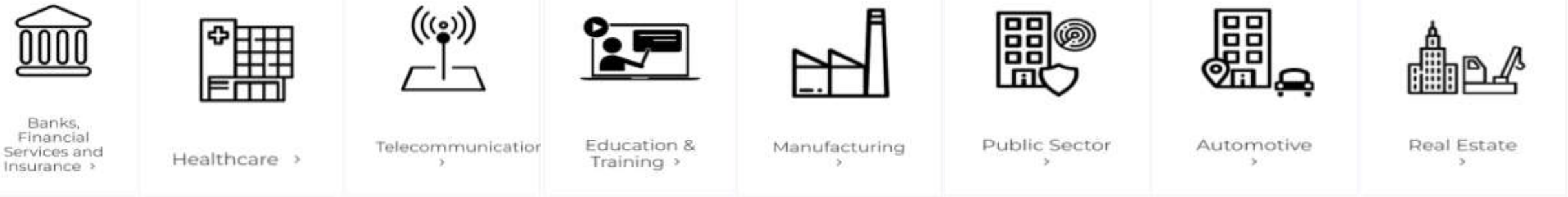
FASTER TIME-TO-MARKET

View app development in real-time. Deploy and update applications with a single click. Deliver software 10 times faster than traditional programming methods.

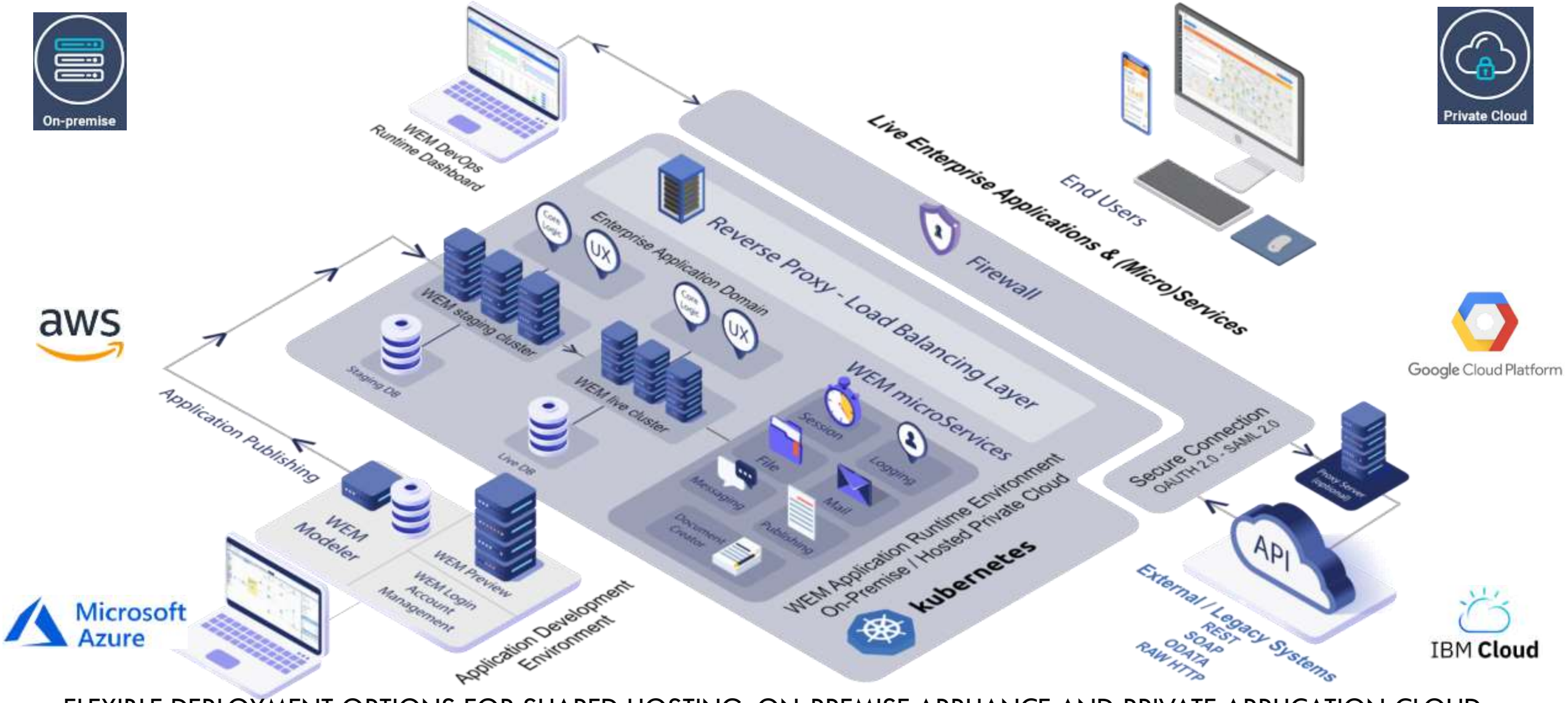
100%

ALIGNED TO BUSINESS

Translate innovative business ideas to custom software built with no code app builder at the speed of, and fully aligned with, business requirements.



SCALABLE, SECURE CLOUD ARCHITECTURE



FLEXIBLE DEPLOYMENT OPTIONS FOR SHARED HOSTING, ON-PREMISE APPLIANCE AND PRIVATE APPLICATION CLOUD

3rd Party LCNC Marketplace Product Evaluation

Criteria	WEM	Betty Blocks	Power Apps	OutSystems	Mendix
Category	No Code	Low code	Low code	Medium to high code	Low code
Platforms	Web, native apps	Web apps	Web, native apps	Web, native apps	Web, native apps
Data Model	Drag & Drop	Visual Editor	Tables	Visual Editor	Visual editor
Visual Editor	Web-based	For backend apps	Web-based	Many designer	Web-based, desktop-based
Workflows	Drag & Drop	Action Modeler	MS Flow	Visual modeler	Visual modeler
Look & Feel	Custom templates	Custom js/css/html	Customizable	Custom js/css	Custom js/css
Environment	Public, private cloud, on premise	Public cloud, on premise	Public, private cloud, on premise	Public, private cloud, on premise	Public, private cloud, on premise
Release Management	Fully	Fully	Partially	Fully	Fully
Integration	All API standards	JSON, SOAP/REST	Office365, REST	SOAP/REST	SOAP/REST

Use Case – Legacy Application Modernization

Based in The Netherlands, this leading healthcare audit company is a part of the Public Health, Welfare and Sports Ministry. This healthcare data management company manages the data registrations to improve birth and healthcare.

CUSTOMER CHALLENGES

- All of the data had to be transformed into HL7 format.
- Data entry had to be kept simple, easy to use, and quicker for general practitioners, doctors, pediatricians, gynecologists, and obstetricians.
- The system had to have optimal performance (customer service real-time response time).
- It had to be integrated with Electronic Patient Record Systems and external data warehouses like Deutsche Telekom Health Services systems.

WEM ADVANTAGES

- **The system was transformed, from two complex and difficult to maintain legacy systems into a single clear, easy-to-use system, in a no-code environment to be maintained by non-IT skilled employees.**
- **The existing data from the legacy systems was used. It was integrated with Electronic Patient Record Systems based on HL7 protocols.**
- **It was a very agile development with week-to-week results, and testing was done by a large group of professional users like general practitioners, doctors, pediatricians, gynecologists, and obstetricians.**
- **The first release went into production in 6 months.**
- **Since it is a cloud solution, the system offers flexible workspaces not tied to any specific location and it is easy to extend.**

PROBLEM

The legacy systems being used in the company were developed in the last 10 to 15 years and were therefore very outdated, hard to maintain, and time-consuming. They were complex to use both on the input and the output side and customers were facing difficulties in using them. After the merger of this company with the other, there was a need for a new and reformed legacy system and data streams. The legacy system had to be re-engineered and was to be live within a year. It had to be able to communicate based upon the international standard healthcare protocols like HL7.

SOLUTION

The organization used WEM to build the new audit registration and reporting system. Their non-IT skilled employees were trained to build the new application, together with WEM. They developed an audit registration system in which all perinatal data is stored. Registration is done by general practitioners, doctors, pediatricians, gynecologists and obstetricians. The application is integrated with the Electronic Patient Record systems of hospitals and other health care providers based on web services/APIs, which in turn are based on HL7 protocols. Next to the core application, the organization developed a unique maintenance system for HL7 messages. Although it was a secondary system, now it is an important system for the HL7 community.

Representative WEM Enterprise Customers

Thank You

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