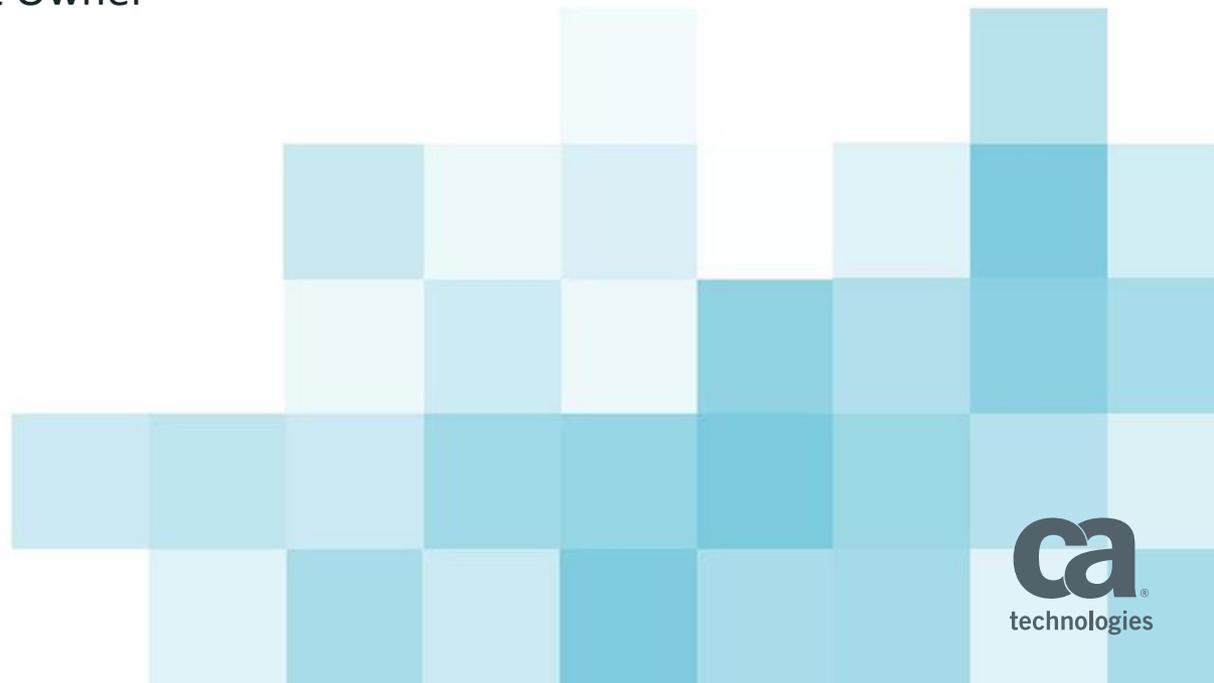


CA 2E Update 2016 – User Group Product Update and Roadmap

Steve Solomon – Product Manager

Vijaya Kumar Dasari – Product Owner

July 2016



Agenda

1 CA TECHNOLOGIES: BUSINESS REWRITTEN BY SOFTWARE

2 AGILE @ CA

3 CA 2E RELEASES

4 CA 2E RELEASE 8.7 REVIEW

5 CA 2E FUTURES

6 TRANSFORMING CA 2E ASSETS , LIVE DEMO

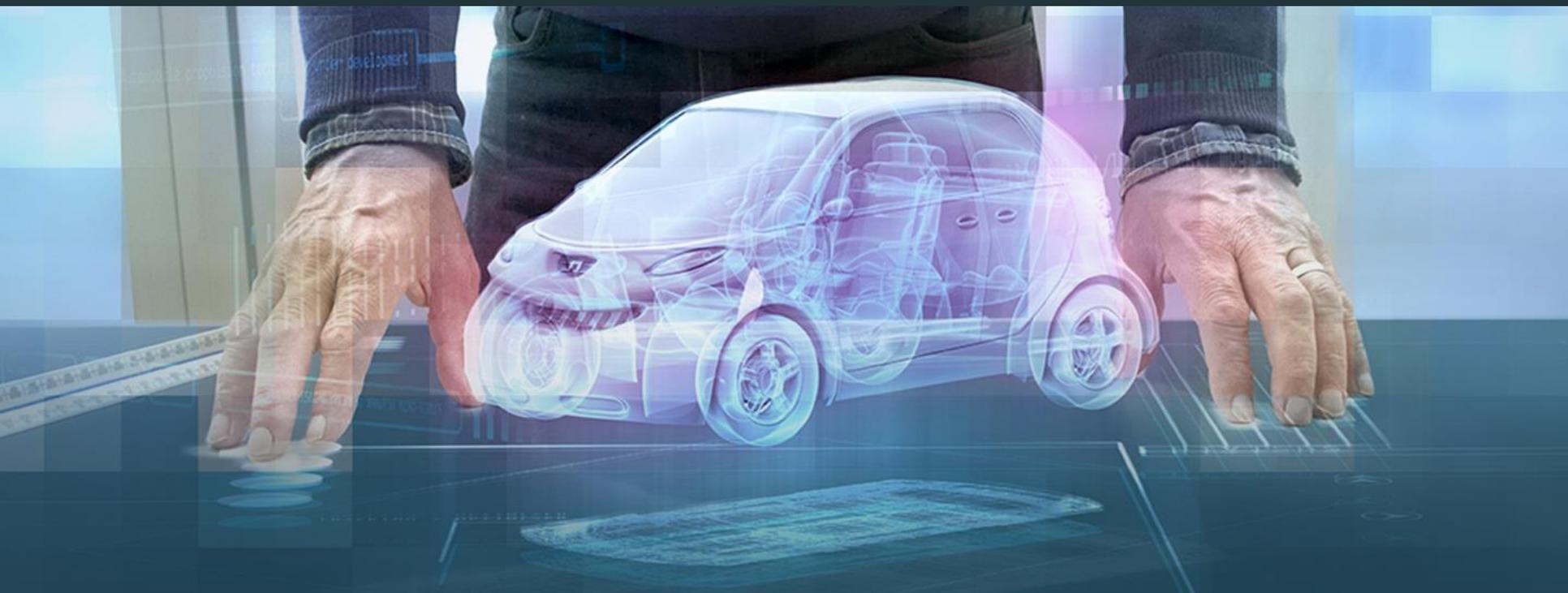
7 Q&A

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Business, rewritten by software™

From planning to development to management to security, at CA we create software that fuels transformation for companies in the application economy.

The journey to digital transformation. Where are you?

78% of enterprises believe that the shift to becoming a software-driven business will be a critical driver of competitive advantage. Over 40% say it is already affecting new product and service development.¹



From sneaker company to data enabled athletic brand.



From book seller to insight driven delivery service, cloud servicer and entertainment hub.



From UK Grocer to global consumer retailer leveraging data and technology that reframes the shopper experience.



From appliance manufacturer to Industrial Internet provider with 10,000 software professionals.

¹"Global Study: The Battle for Competitive Advantage in the Application Economy", Oxford Economics and CA Technologies, June 2015



CA is one of the largest, independent system software companies in the world that continues to transform the face of business.

Since 1976, we've been a culture of innovation—half of our 11,600 person workforce is in development, creating better ways of managing, securing and deploying IT infrastructure.

CA Technologies: Proven expertise and staying-power

35+

YEARS MANAGING COMPLEX
IT ENVIRONMENTS

\$4.26

BILLION ANNUAL REVENUE
AND STRONG PROFIT

- Invests more than **\$1 billion** each year in designing and supporting software
- Holds more than 1,050 patents worldwide, with more than 950 patents pending
- CA technologies received a positive overall vendor rating from Gartner, Inc.¹

A marquee customer base²:

46 of 50

Fortune 50

20 of 20

Largest global banks

13 of 15

Largest financial services companies

8 of 10

Largest defense/aerospace companies

23 of 25

Largest U.S. Federal agencies³

9 of 10

Largest pharmaceutical companies

20 of 20

Largest insurance companies

10 of 10

Largest telecom companies

¹Gartner, Inc.; "Vendor Rating: CA Technologies"; David Cappuccio, et al; August 31, 2015. Gartner does not endorse any vendor, product or service depicted in its research publications, and does not advise technology users to select only those vendors with the highest ratings or other designation. Gartner research publications consist of the opinions of Gartner's research organization and should not be construed as statements of fact. Gartner disclaims all warranties, expressed or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

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Senior Director, Product Management

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Dana.Boudreau@ca.com



Agile Development @ CA

Take the opportunity to influence our product development.
Help ensure that we deliver is what you need and want.



Influencing Our Roadmap

CA Communities Ideation

- Submit your ideas on communities.ca.com
- Vote & comment on ideas that are important to you
- CA Product Management reviews ideas and updates status as they move through the lifecycle
- “Currently Planned” idea status indicates inclusion in Agile Backlog or Product Roadmap

Customer Validation

- Register to participate in:
 - Monthly Reviews with Live Demos
 - Private - Members Only - Online Community
 - Pre-Release Onsite Testing and Support (Beta)
- How to register:
<https://validate.ca.com>

Ideas - communities.ca.com

The screenshot shows a web browser window with the following elements:

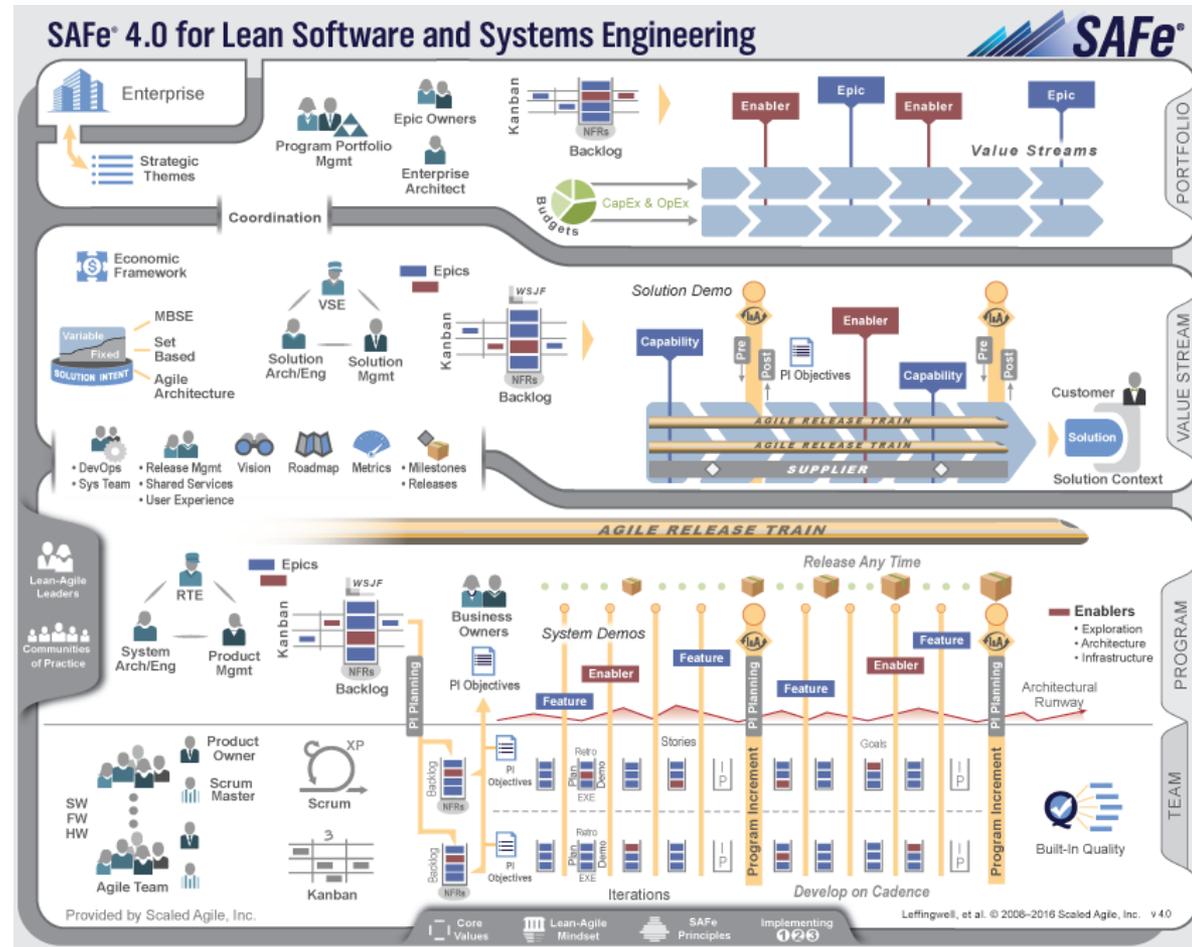
- Browser Title:** Community: CA Plex CA 2E | CA Communities - Windows Internet Explorer
- Address Bar:** <https://communities.ca.com/community/ca-plex-ca-2e/content?filterID=contentstatus%5Bpublished%5D~objecttyp>
- CA Technologies Logo:** Located in the top left corner.
- Navigation Menu:** Products, Services, Support, REWRITE, Communities, Partners.
- Secondary Navigation:** Home (8), Content, People, Communities, Help, Apps.
- Search Bar:** Located on the right side of the secondary navigation.
- Breadcrumbs:** All Places > CA Plex CA 2E
- Community Header:** CA Plex CA 2E, with a "Following in 1 stream" button.
- Content Filter Section:** Includes a toolbar with icons for document, list, chat, bar chart, calendar, and a lightbulb icon (highlighted with a red circle). Below the toolbar are filters for "All stages", a text input "Type to filter by text", a "Filter by tag" button, and a "Sort by score" dropdown.

CA Uses SAFe and Agile to Develop Software

CA 2E Engineering is moving to use SAFe with SCRUM and Kanban to develop customer focused innovation

You are invited to be part of the process as part of our Customer Validation Process using www.validate.ca.com

www.scaledagileframework.com



CA 2E Releases Status

■ CA 2E 8.5:

- GA August 28, 2009
- EOS November 30, 2015

■ CA 2E 8.6:

- GA April 10, 2012
- EOS Announcement coming when planning for Release 8.7.1 is complete
- Please upgrade to Release 8.7 to prepare your company for Release 8.7.1

■ CA 2E 8.7:

- GA October 29, 2014
- EOS Not Announced



CA 2E Previous Releases PTF Plans

- CA 2E 8.6:
 - PTF Rollup Release
 - Team is working on a single roll up of all published PTFs
 - Likely last updates to release 8.6
- CA 2E 8.7:
 - PTF Rollup Release
 - Team is working on a single roll up of all published PTFs



CA 2E 8.7 Release Highlights

Features 1 of 3

- Action Diagram Call Prompt Using an External name
- Allow SQL Record Level Access
- Allow RLA Access over DDL Database
- Allow SQL/DDL Generation without hard-coded schema name
- Allow LVLCHK(*YES) for SQL/DDL indexes having RCDFMT keyword
- Command Key Processing (Mouse-click and Key-press)
- Device User Source Substitution Variables
- Meaningful Names for SQL/DDL



CA 2E 8.7 Release Highlights

Features 2 of 3

- Refresh Action Diagram Statements
- Select/Omit in DDL Index
- Suppress Display of NLL Parameters
- Trigger Error Processing if no Control Data
- YCPYMDLOBJ New Override Target Model Locks Parameter
- YCVTSPLF Flexibility
- Option to Generate RLA against DDL
- F7=Auxiliaries in the DDL Implementation



CA 2E 8.7 Release Highlights

Features 3 of 3

- Support CM Promotion of DDL Objects (Not Switched from DDS)
- Support CM promotion of DDL objects (DDS to DDL Conversion)
- > 76 fixes 
- CA 2E 8.7 provides support for customers to more easily transition from DDS to DDL type databases, to reap the value that IBM continues to add to SQL on the IBM i platform.

DDS → → **DDL**

Roadmap: CA 2E

	Delivered	Planned	Under Consideration
Product/Releases	CA 2E 8.7	CA 2E 8.7.1	CA 2E 8.7.2
Marquee Features/ Business Value	<ul style="list-style-type: none"> ▪ Simplify conversion from DDS to DDL database by allowing you to continue to use RLA functions without regenerating and recompiling them ▪ Simplify deployment and Change Management by allowing generated database objects to be compiled into any desired SQL collection or library as specified in the YSQLLIB model value ▪ Ensure that indexes are protected from data corruption by creating them with LVLCHK(*YES) when the RCDFMT keyword is used ▪ Change Management support for DDL objects <p>Currently GA</p>	<ul style="list-style-type: none"> ▪ IBM i OS 7.3 Certification including all core components ▪ Improve SQL Support by adding enhanced support for SQL <ul style="list-style-type: none"> ▪ Optimize for “N” Rows ▪ Partition Support ▪ Select by Column Name ▪ Custom Views ▪ Data access by file type - RLA for DDS and SQL for DDL/SQL files ▪ Make it easier to consume web services by having meaningful names in WSDL ▪ Make CA 2E Easier to Use by adding native string handling routines ▪ Architectural Runway for REST API Enablement 	<ul style="list-style-type: none"> ▪ Customer Enhancements ▪ Improved Performance ▪ Improved API Support ▪ REST Enablement

Timeline as of July 2016

Influencing Our Roadmap – As a reminder

CA Communities Ideation

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- CA Plex and CA 2E Community
- Use Ideas and Tag CA 2E
- Vote & comment on ideas that are important to you
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 - www.validate.ca.com select the CA 2E Group



Steve Solomon

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in



cm **FIRST**
Rethink Modernization

Transforming or Modernizing Your CA 2E Assets in 2016

– What the User Community is Considering and Doing

John Rhodes– CTO, Managing Director, CM First Group

July 2016

What is the future for Your 2E Apps?

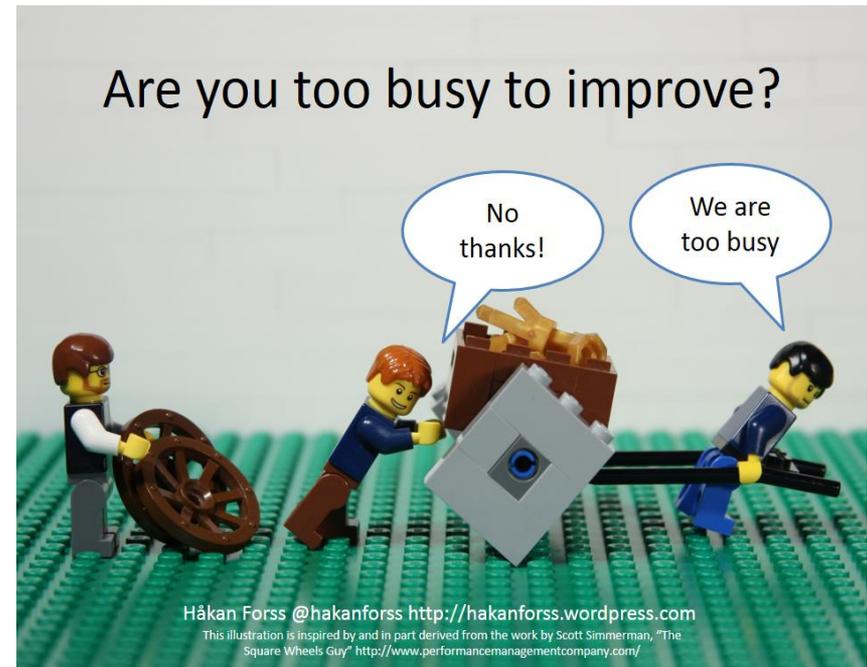
- Rewrite / Replace
 - Large capital investment
 - Fact: most rewrite projects fail
- Status Quo
 - You know what happens here
- Or...

Improve what you have already invested in
via incremental improvements or migration



Improvement in Place Strategies

- New Training Courseware Partnership with CA
- SQL Migration / Web Option / Services
- DevOps – CA 2E CM / Implementer / MatchPoint
- Team Augmentation



What we hear from CA 2E Replatforming Customers

- You have **1000s** screens and functions to migrate
- Your system works well but future holds:
 - Replatforming
 - Responsive UX
 - APIs and more
- Future should follow current tech standards
- Budgets are tight and management doesn't like risk
- Your developers must be able to understand and maintain the modernized code base

Consider A Long Term Solution CM M3

Extend CA 2E Economic Life

Take the legacy software
and automatically
transform the old code
into a modern new
solution



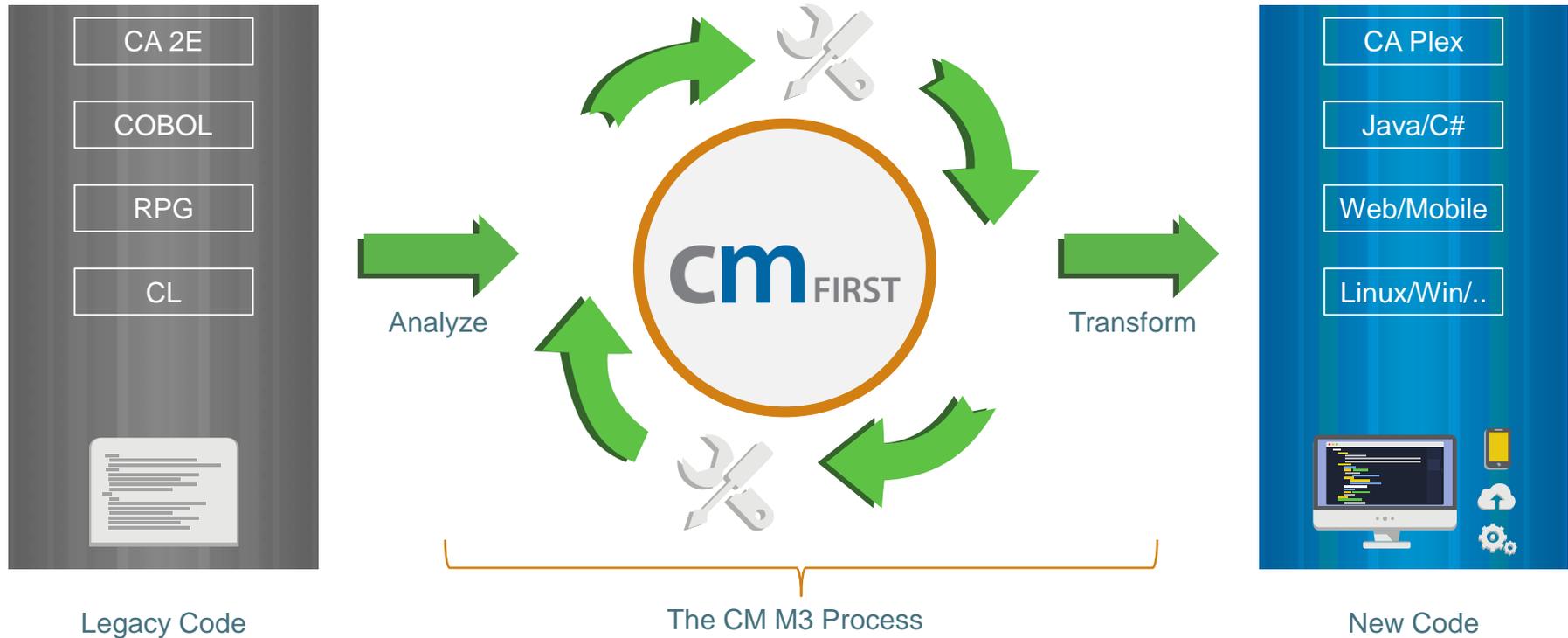
Effective CA 2E modernization requires:

1. Automation approaching 100% of supported functions
2. Preservation of Model Environment Productivity
3. A Maintainable and Understandable Result
4. Guaranteed, Predictable Costs / Timelines
5. Responsive Web applications and API's out of the box



- **Goal: A modern, refactorable system with reduced technical debt.**

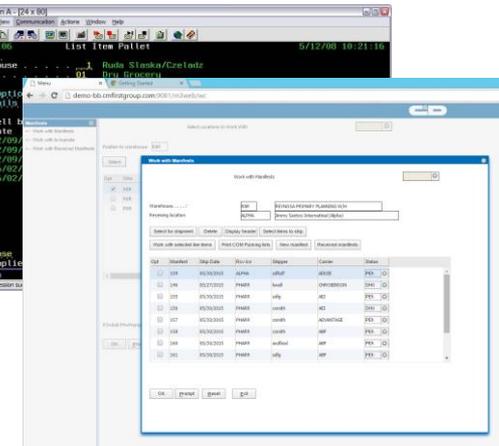
How the Modernization Process Works



Fixed cost, defined time frame (weeks)

Transform to Rich, Standards Based Apps

- ❖ Modern Databases
- ❖ HTML5 Responsive UX
- ❖ API Interfaces
- ❖ Inheritance
- ❖ Eclipse/Visual Studio
- ❖ Versioning / Customization Control
- ❖ Modern Deployment Stack/Cloud/SaaS
- ❖ Developer Productivity



A New User Experience that's Rich Web and HTML 5 Runs on All Browsers, and/or as a Device Native Hybrid App

cm FIRST
Rethink Modernization

Products Services Company Blogs

Accounting **Maintain Persons New**

Staff

Settings

Cash Batches

Person

Maintain Persons

Maintain Persons New

Policy

Product

Rate

States

Work with Person Entries

Apply New Delete

Person First	Person Last
Paul	Simon
Bob	Smith
Jones	Bill
Mary	Smith
Larry	Lewis

Person First: Jones
 Person Middle: B
 Person Last: Bill
 Person Suffix: Jr.
 Person Language: ENG
 Person Tax ID: 322121112
 Sex: Male
 Birth Date: 10/06/64
 Tobacco Use: Non-Smoker
 Photo: 

Application: Word Online

Download Save to OneDrive Print Find

Your Company Name
 INVOICE / 01-01-2013

Your Address
 City, State Zip

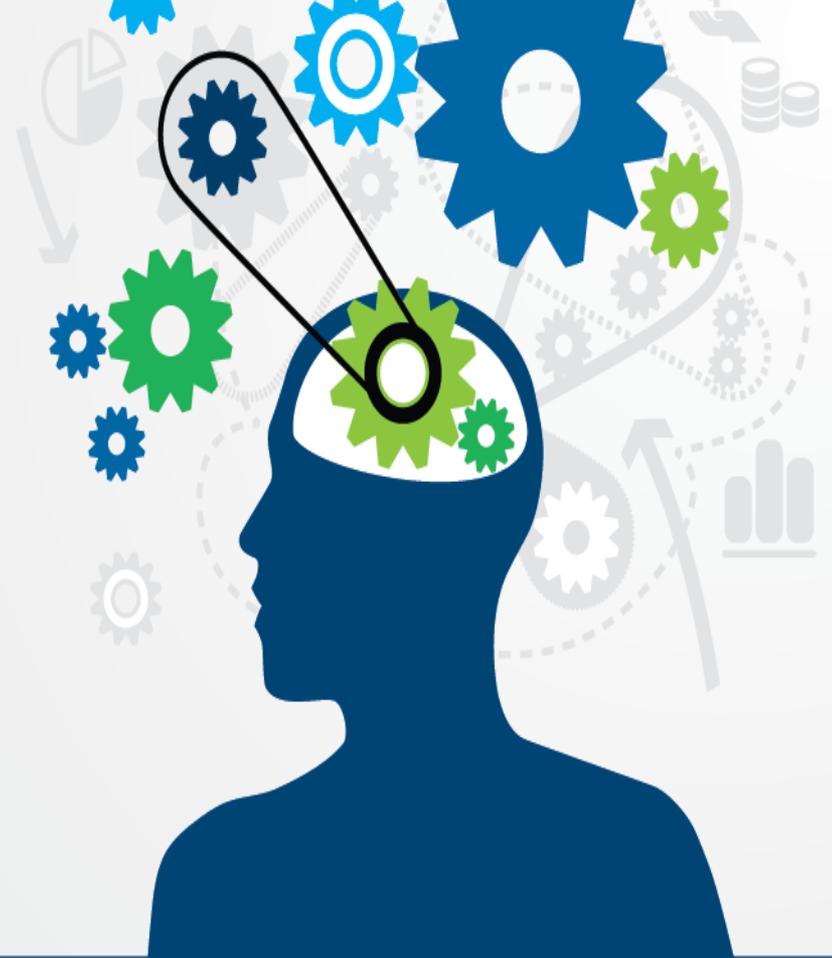
Client Name
 Address

BALANCE DUE
 Upon Receipt
\$0.00

City Price Per Total

HELP IMPROVE OFFICE 75%

Map Satellite
 Ann and Roy Butler Hike and Bike Trail
 S 1st St
 Ann and Roy Butler Hike and Bike Trail
 Ann and Roy Butler Hike and Bike Trail
 Google
 Map data © 2016 Google Terms of Use Report a map error



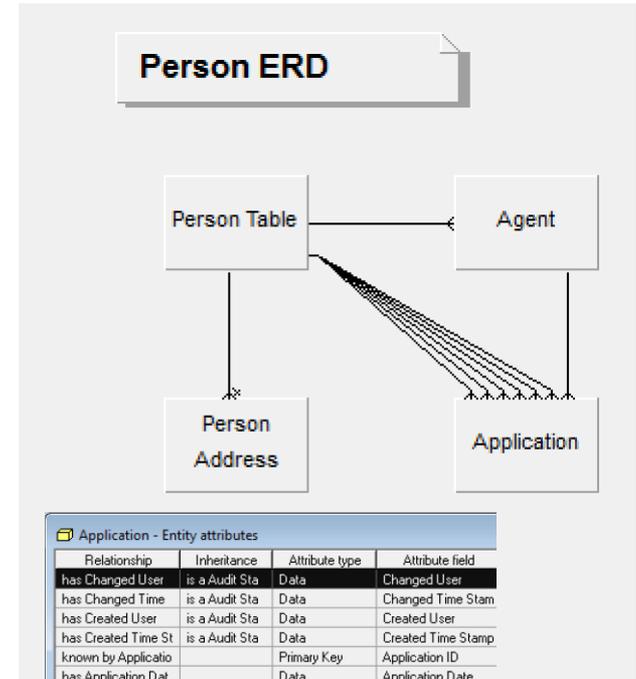
A Live Modernization Demo

Database Relations and Schema

```

*PGMR  CMINSMDL2                Op: JDRHODES  JDR          7/26/16  8:45:48
EDIT DATABASE RELATIONS                CMINSMDL2
=>
? Typ Object                      Rel lvl:
  Typ Object                      Relation      Seq Typ Referenced object
---
FIL Application                    Has           131 FLD Nicotene Other Last used
FIL Application                    Has           132 FLD Nicotene amount/freq
FIL Application                    Has           145 FLD Billing Frequency
FIL Application                    Has           150 FLD Billing Method
FIL Application                    Has           155 FLD Cash with Application Amt
FIL Application                    Has           160 FLD Bank Routing Number
FIL Application                    Has           165 FLD Bank Account Number
FIL Application                    Refers to    200 FIL Product
FIL Application                    Refers to    201 FIL Person Table
      For: Beneficiary 1          Sharing: *ALL
FIL Application                    Refers to    201 FIL Person Table
      For: Beneficiary 2          Sharing: *ALL
FIL Application                    Refers to    201 FIL Person Table
      For: Beneficiary 3          Sharing: *ALL
FIL Application                    Refers to    201 FIL Person Table
      For: Insured               Sharing: *ALL
More...

Z(n)=Details  F=Functions  E(n)=Entries  S(n)=Select  F23=More options
F3=Exit      F5=Reload    F6=Hide/Show  F7=Fields    F17=Services
  
```



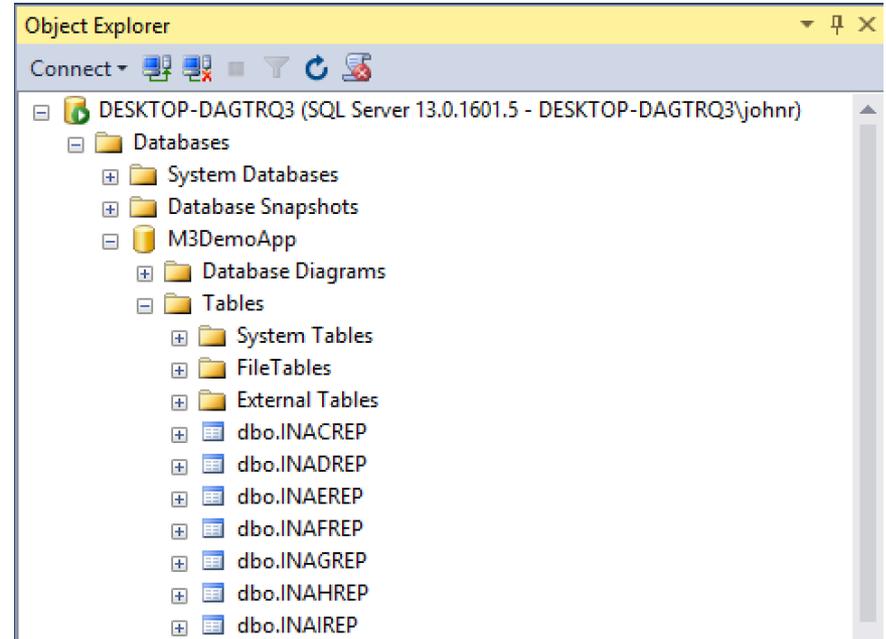
Application - Entity attributes			
Relationship	Inheritance	Attribute type	Attribute field
has Changed User	is a Audit Sta	Data	Changed User
has Changed Time	is a Audit Sta	Data	Changed Time Stamp
has Created User	is a Audit Sta	Data	Created User
has Created Time St	is a Audit Sta	Data	Created Time Stamp
known by Applicatio		Primary Key	Application ID
has Application Dat		Data	Application Date
has Application Stat		Data	Application Status
has Applied for Units		Data	Applied for Units
has Drivers License		Data	Drivers License
has Drivers License		Data	Drivers License Stat
has Marital Status		Data	Marital Status
has Birth Place		Data	Birth Place
has Occupation		Data	Occupation
has Length in Occu		Data	Length in Occupation
has Licence Revok		Data	Licence Revoked 5
has Alc\Drug Convi		Data	Alc\Drug Convict 5
has Member armed		Data	Member armed servi
has Pilot License?		Data	Pilot License?
has Foreign travel n		Data	Foreign travel next y
has Replacement P		Data	Replacement Policy
has Replacement In		Data	Replacement Info
has Employers Nam		Data	Employers Name
has Time with Emplo		Data	Time with Employer
has Ever used Toba		Data	Ever used Tobacco
has Cigarettes last u		Data	Cigarettes last used
has Cigarette Amou		Data	Cigarette Amount\Fr
has Cigarette last used		Data	Cigarette last used

Schema/Data Transformed (SQL Server)

```

Columns . . . : 1 71      Edit      CMINSGEN2/QDDSSRC
SEU=>          INAJREP
-----
FMT A* .....A* 1 ..... 2 ..... 3 ..... 4 ..... 5 ..... 6 ..... 7
0009.00      H* Copyright      : CMINSMDL2
0010.00      H*
0011.00      A*=====
0012.00      M* Maintenance :
0013.00      A*=====
0014.00      A          R FAJREAN          TEXT('Application')
0015.00      A*-----
0016.00      A          AJA OCD          20          TEXT('Application ID')
0017.00      A          AJA OCD          20          COLHDG('Application' +
0018.00      A          AJA OCD          20          'ID')
0019.00      A          AJACDX          8 0          TEXT('Application Date')
0020.00      A          AJACDX          8 0          COLHDG('Application' +
0021.00      A          AJACDX          8 0          'Date')
0022.00      A          AJACDX          8 0          EDTWRD(' / / ')
0023.00      A          AJALST          1          TEXT('Application Status')
0024.00      A          AJALST          1          COLHDG('Application' +
0025.00      A          AJALST          1          'Status')

F3=Exit  F4=Prompt  F5=Refresh  F9=Retrieve  F10=Cursor  F11=Toggle
F16=Repeat find  F17=Repeat change  F24=More keys
    
```

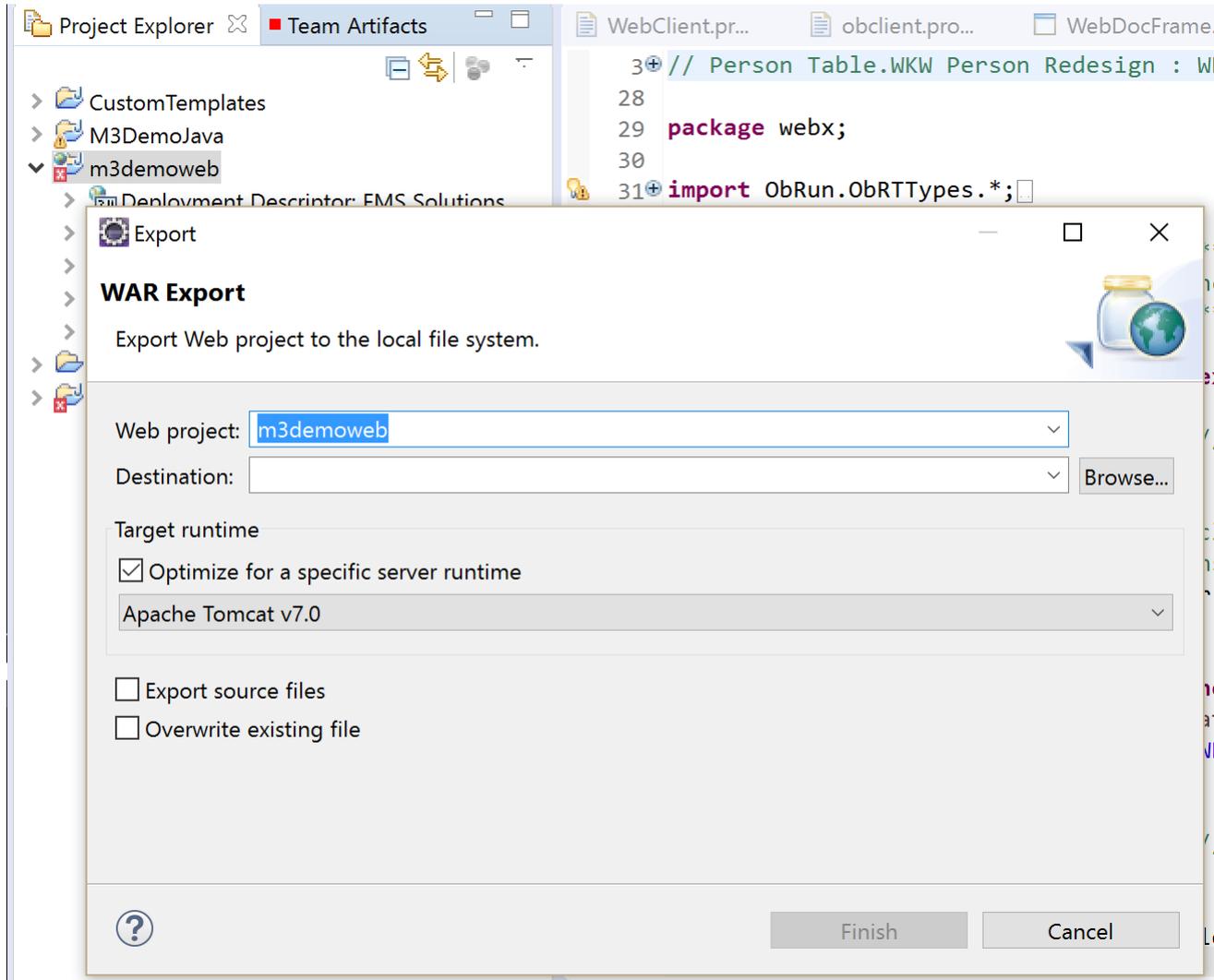


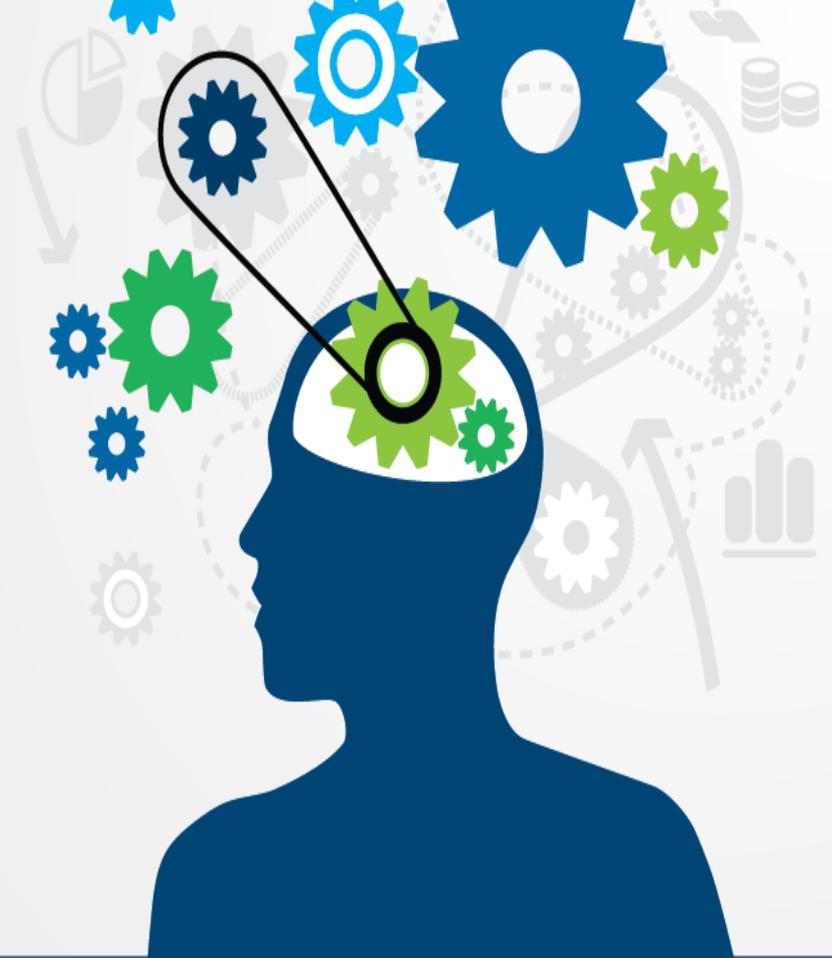
```

CREATE TABLE [dbo].[INAJREP](
    [AJA OCD] [char](20) NOT NULL,
    [AJACDX] [numeric](8, 0),
    [AJALST] [char](1) NULL,
    [AJAEQT] [money] NULL,
    [AJATCD] [char](20) NULL,
    [AJAUCD] [char](2) NULL,
    [AJARST] [char](1) NULL,
    [AJAVCD] [char](30) NULL,
    [AJAWCD] [char](30) NULL,
    [AJAIQT] [money] NULL,
    [AJASST] [char](1) NULL,
    [AJATST] [char](1) NULL,
    [AJAUST] [char](1) NULL,
    [AJAVST] [char](1) NULL,
    [AJAWST] [char](1) NULL,
    [AJAXST] [char](1) NULL,
)
    
```

AJA OCD	AJACDX	AJALST	AJAEQT	AJATCD	AJAUCD	AJARST	AJAVCD
100	20150101	A	11.0000	11111	AZ	M	USA
AP001	20150101	P	10.0000	11221	A	M	USA
AP002	20150101	P	10.0000	11221	A	M	usa
AP003	20150101	P	10.0000	11221	A	M	USA
IVY01	20150101	P	10.0000	11221	A	M	usa
IVY02	20150101	P	10.0000	11221	A	M	usa
IVY06	20150101	P	10.0000	11221	A	M	usa
IVY07	20150101	P	10.0000	11221	A	M	usa
IVY09	20150101	P	10.0000	11221	A	M	usa
IVY10	20150101	P	10.0000	11221	A	M	usa
IVY11	20150101	P	10.0000	11221	A	M	usa
IVY15	20150101	P	10.0000	11221	A	M	usa
IVY33	20150101	P	10.0000	11221	A	M	usa
IVY45	20150101	P	10.0000	11221	A	M	usa
IVY98	20150101	P	10.0000	11221	A	M	usa
WSDL120	20150101	P	10.0000	11221	A	M	USA
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Running on Any Platform as Java Web App





LEARN MORE @

<http://cmfirstgroup.com>



Now,
How about some
Questions for
Steve and John
from today's
Audience?