

# DIY Upgrade – 9.01.xx

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# Linemaster Switch Corporation

2

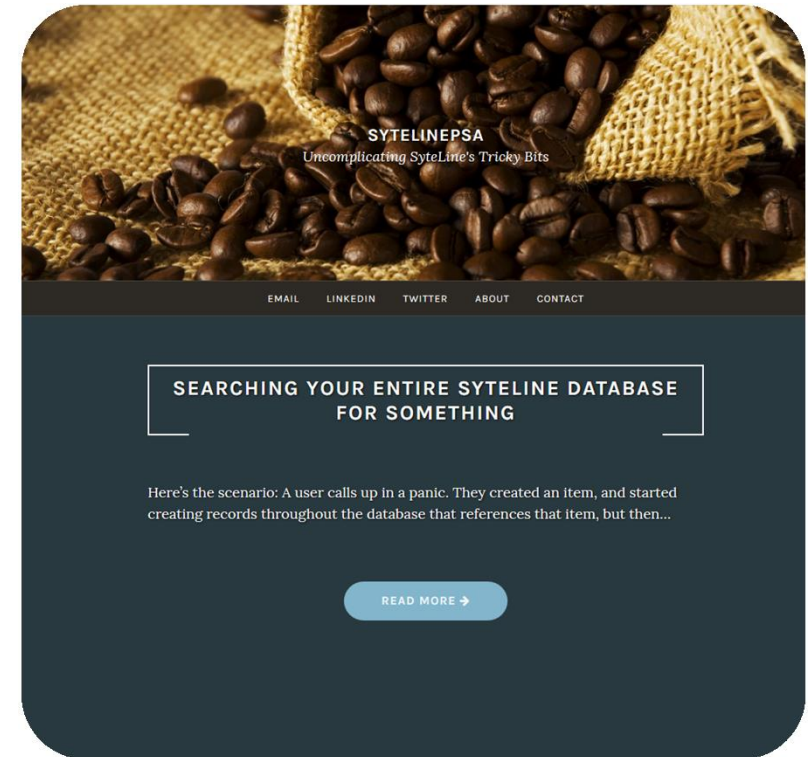
- ◆ Founded in 1952
- ◆ Light manufacturing company
- ◆ Privately held
- ◆ Located in Woodstock, CT
- ◆ 200 employees
- ◆ 35 million dollar concern
- ◆ Shipped over 675,000 units in 2017



# Want the Slides Early?

...

- ◆ Go to <https://sytelinepsa.com>
- ◆ The slides are available there now.
- ◆ We'll also look at some resources on the blog during the presentation.
- ◆ The slides will still be released by SUN after the conference.



# Agenda



## Why Upgrade?

Determining your ROI



## Phase I: Start Now

What can I do today?



## Phase II: The upgrade

It only took us 9 tries...



## Phase III: Merging Customizations

What to do when everything breaks.



## Phase IV: Testing and Going Live

Crossing the finish line in one piece.



## Lessons Learned

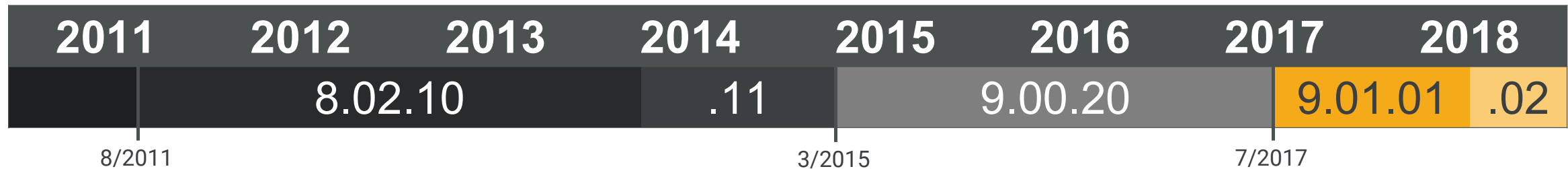
Learn from our mistakes.



# Why Upgrade?

# Our Timeline

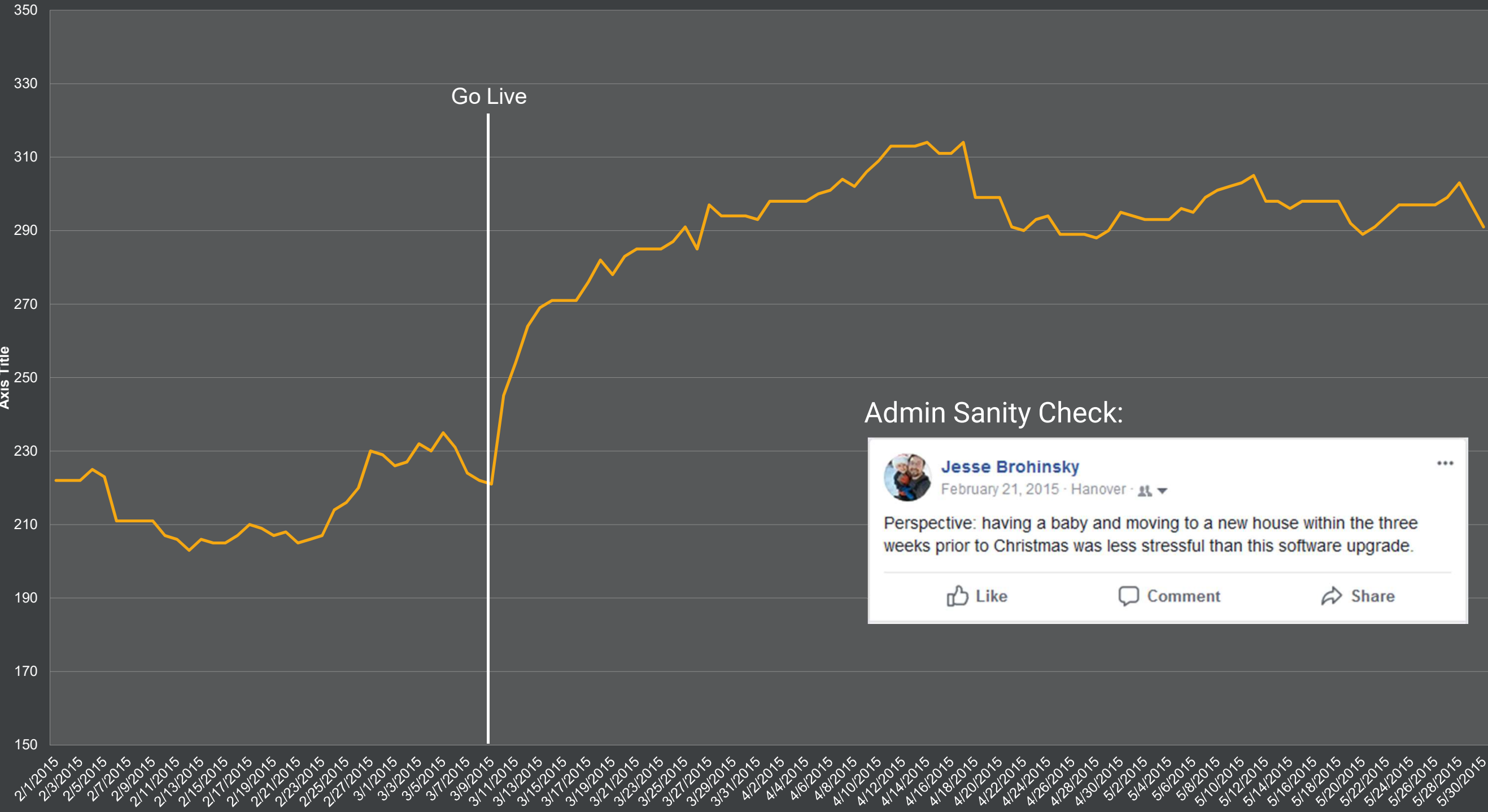
...



- ◆ We've done two upgrades.
  - ◆ It took us 4 years to upgrade to 9.00.20
  - ◆ It took us 2 years to upgrade to 9.01.01
- ◆ Let's compare the two experiences.



# Helpdesk Ticket Count 9.00.20 Go-Live



## Admin Sanity Check:





**Jesse Brohinsky**

February 21, 2015 · Hanover · 21 ▼

Perspective: having a baby and moving to a new house within the three weeks prior to Christmas was less stressful than this software upgrade.

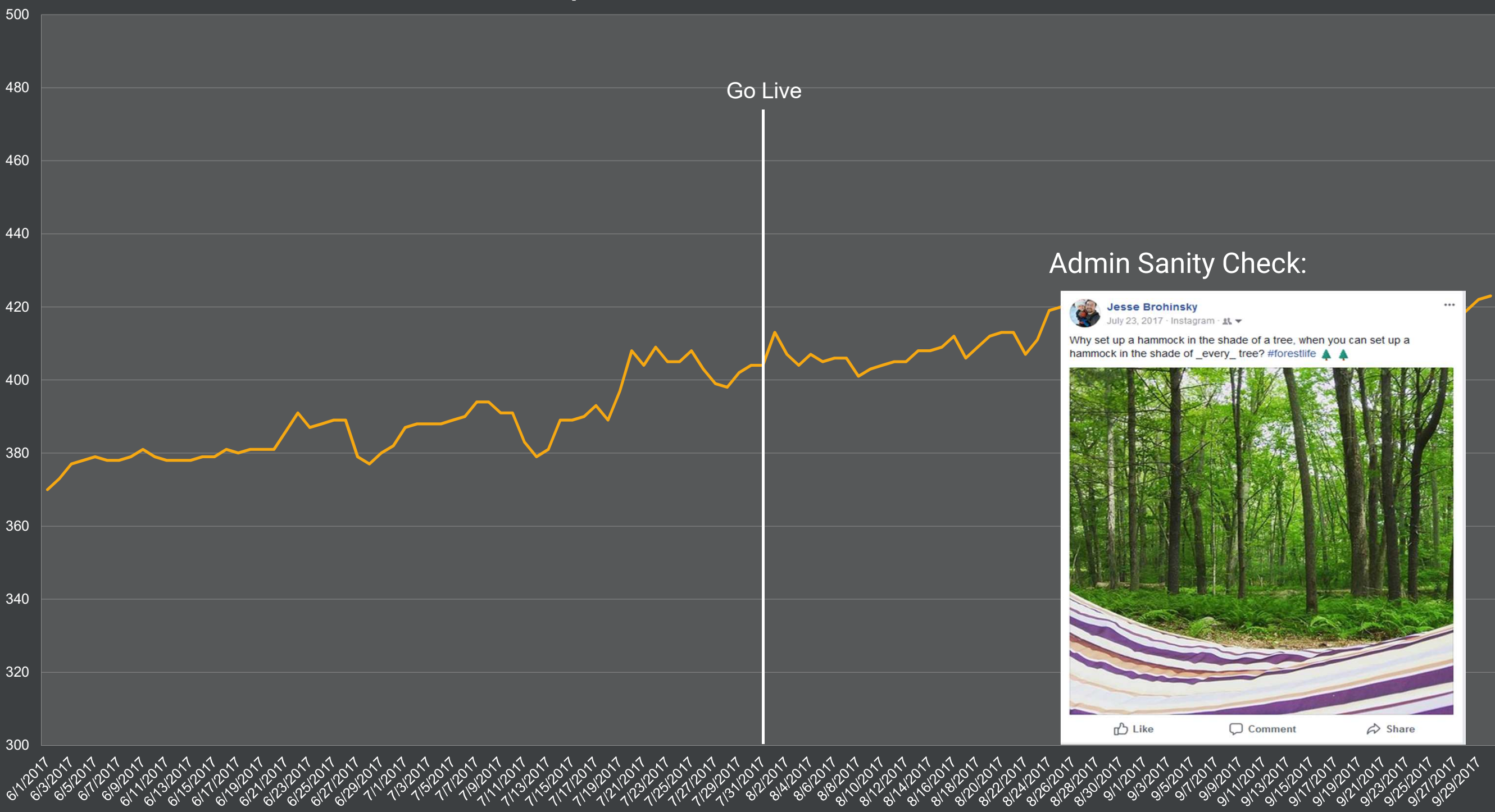
 Like

 Comment

 Share



# Helpdesk Ticket Count 9.01.01 Go-Live



Go Live

Admin Sanity Check:





# Why the Difference?

...

## ◆ 8.02.11 -> 9.00.20

- ◆ Our first upgrade
- ◆ Major Release
  - ◆ Absorbed 6 versions at once.
- ◆ Didn't understand our system
- ◆ Didn't merge properly
- ◆ Hadn't installed patches
- ◆ Rushed to hit a deadline

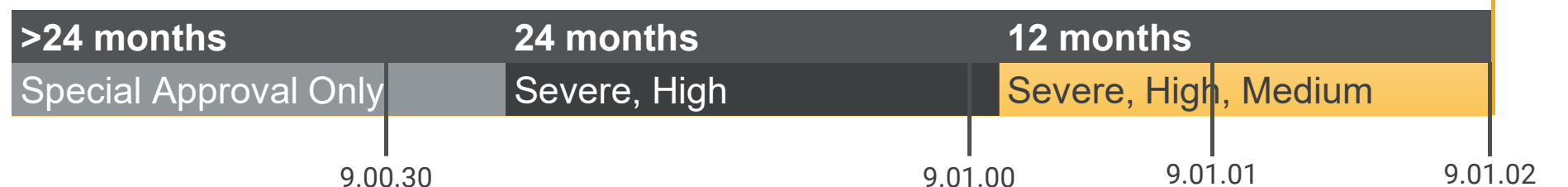
## ◆ 9.00.20 -> 9.01.01

- ◆ Users knew what to expect
- ◆ Minor Release
  - ◆ Only absorbed 2 versions at once.
- ◆ Understood our Customizations
- ◆ Understood merging
- ◆ Stayed up to date on RPLs
- ◆ Controlled our own timeline

# Why Did We Upgrade?

...

- ◆ On-Demand Patch End of Life (KB 657915)



- ◆ Performance Improvements
- ◆ New Capabilities
  - ◆ Flexlayouts
  - ◆ Dataview Parameters
- ◆ Desire to implement InforOS

# How long did it take?

...

- ◆ It's hard to say.
  - ◆ We started in March...ish.
  - ◆ We went live the last week of July.
- ◆ We also did a SAN upgrade during this time
- ◆ Much time was spent trying to get Infor OS off the ground.
  - ◆ We're still not running it.



# Do-It-Yourself?

...

- ◆ Project Flexibility
- ◆ Opportunities for improvement
  - ◆ Clean up customizations
- ◆ Knowledge of your system
  - ◆ Helps with troubleshooting
  - ◆ Allows faster creation of test environments
  - ◆ Opportunity for better documentation

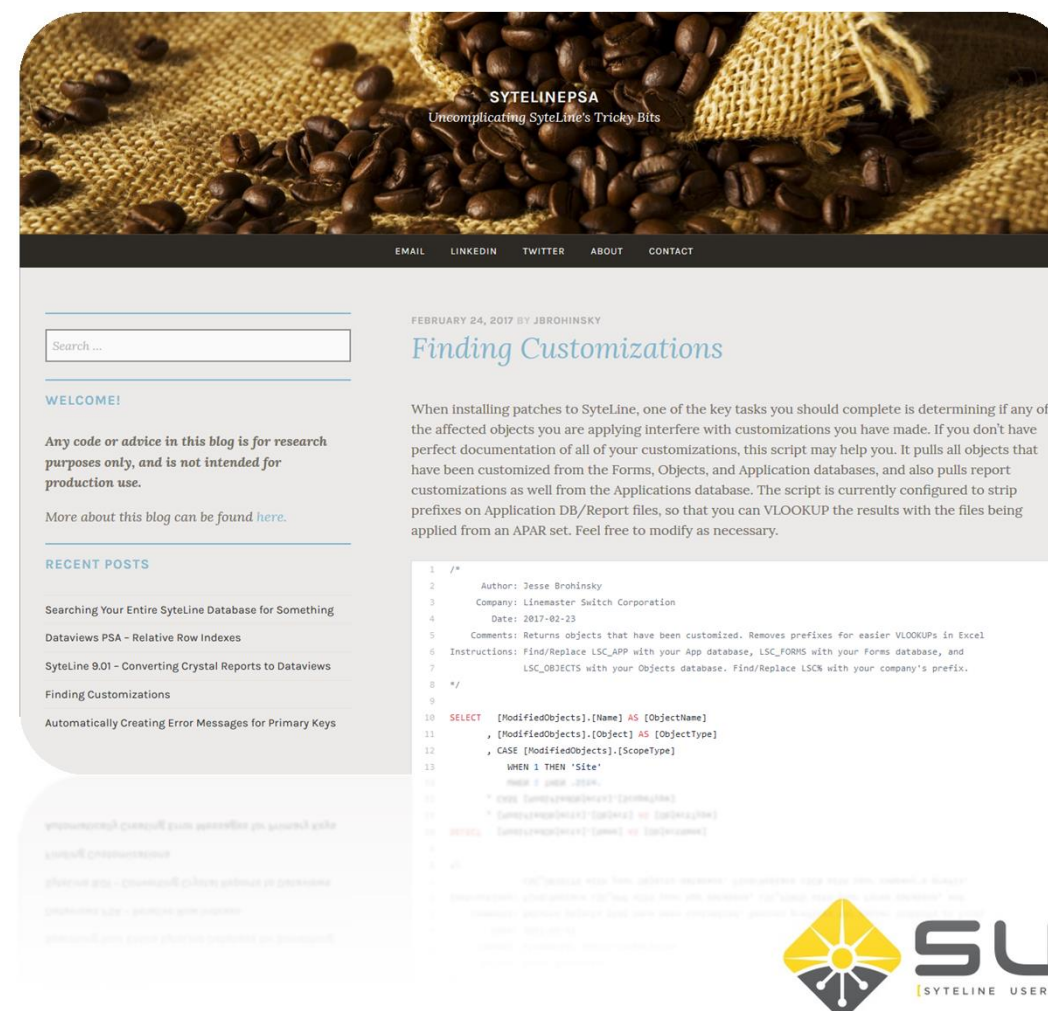


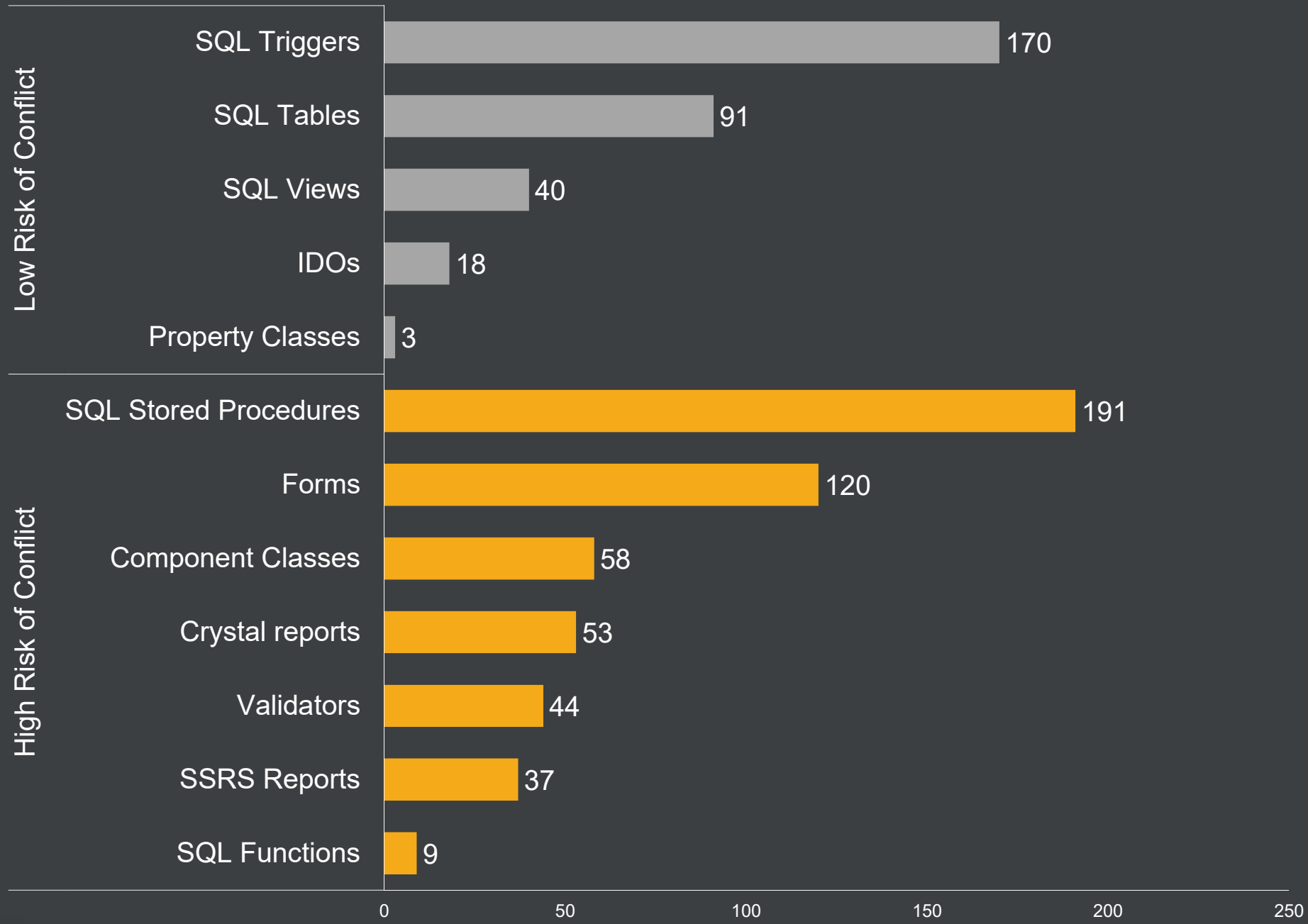


# Phase I: Start Now.

# Understanding your Customizations

- ◆ Get a list of your customizations
  - ◆ <https://syteinepsa.com>
  - ◆ **“Finding Customizations”**
  - ◆ SQL Script pulls all custom objects
- ◆ Know what is important:
  - ◆ Vendor  $\cap$  Site
  - ◆ Obsolete whatever you can.







Forms Database Objects

72

5

SQL Objects

29

8

SSRS Reports

27

Crystal reports

25

24

0 10 20 30 40 50 60 70 80 90

■ Site Versions ■ Obsoleted

Vendor

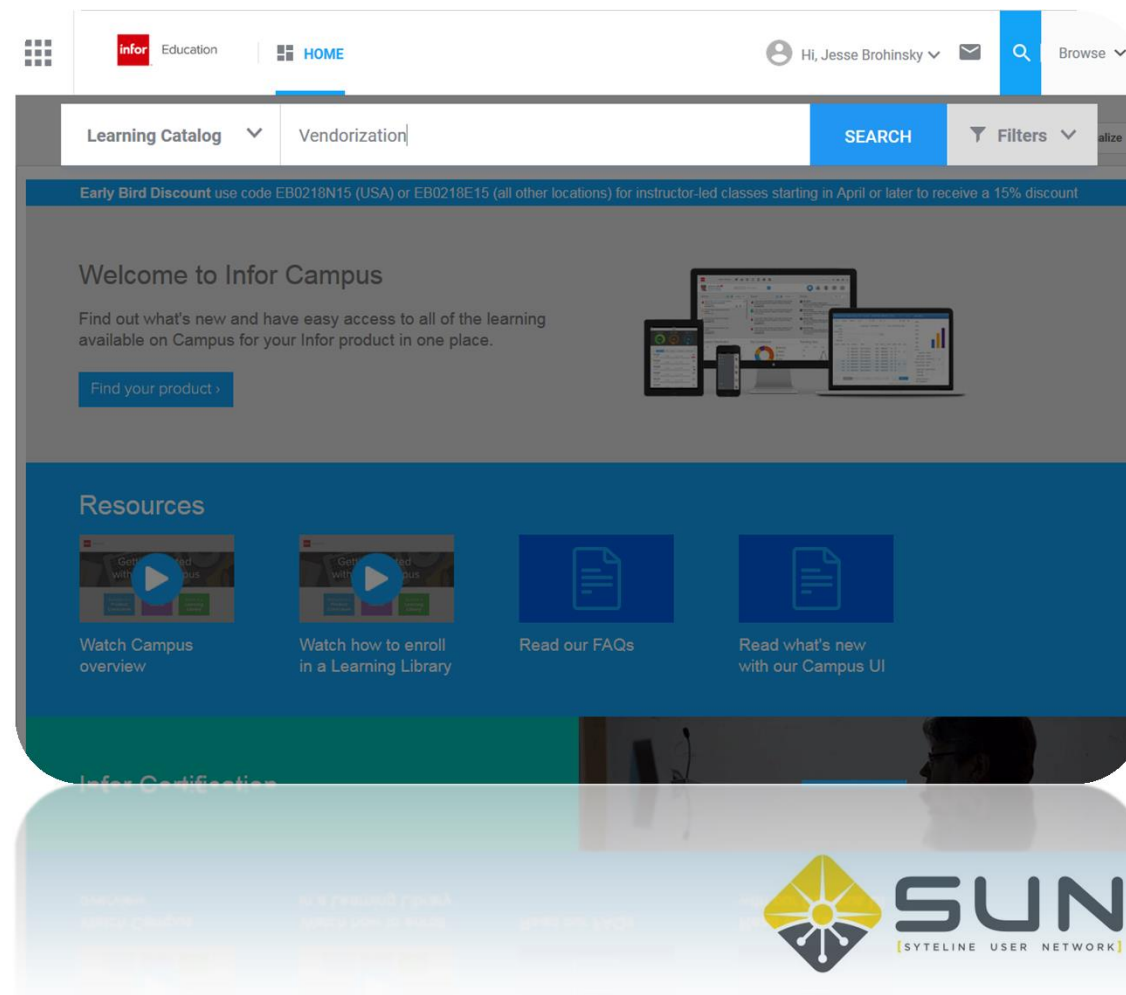
Site



# Vendorization

...

- ◆ Simply put, slim down unnecessary changes.
  - ◆ Helps you understand your customizations
  - ◆ Makes APARs easier
  - ◆ Will help with FormSyncing.
- ◆ Infor Webinar:
  - ◆ Log into Infor Campus
  - ◆ Search: **Vendorization**
  - ◆ Watch the webinar. (Free!)



# Recommended Patch List

- ◆ InforXtreme KB: 687153
  - ◆ Sign up for email notifications!
- ◆ Recommended Patch Analysis Form
  - ◆ SyteLine 8.03+
  - ◆ Run from Utility Server

Environment Info

System Version: 9.01.00

App DB: LSC\_APP

Forms DB: LSC\_FORMS

☒ Display Missing Recommended Patches  
☐ Display All Applied Patches  
☐ Display All Applied Patches, Last Date

Check System

	APAR	Recommended	Date Applied	Form	Description
1	238752	True		DatabaseMaintenance	Drop Temp Tables deletes the tmp_mass_journal table
2	238414	True		InventoryBalanceReport	License Reques for new report forms
3	238239	True		MaterialPlannerWorkbench	Wrong whse assigned to PO line/release created from MPW
4	238232	True			Change data patch scripts to run for an unlimited number of Sites
5	238202	True		PositivePayFileGenerator	Positive Pay File Generator Ignores Date Range
6	238151	True		APCheckPrintingPosting	Print AP Check is Voiding the check instead of printing correctly
7	237981	True		InventoryParameters	when check generate lot flag lot number in existing serials not expanded
8	237864	True		APVouchersandAdjustments	Foreign currency exchange take system rate instead of specified rate w...
9	237837	True		ARPayments	AR offset payment and AP offset payment are removed by a different...
10	237807	True		APPayments	Unable to select the right open payment to reapply with duplicate chec...
11	236683	True		EstimateResponseFormRep...	'Experienced an exception while executing [RenderReport]; This report r...

# Install Demo!

...

- ◆ Build out your server infrastructure
  - ◆ Build new machines for your upgrade.
  - ◆ Virtual Machines are awesome.
- ◆ Have something to show off
  - ◆ Build excitement!
  - ◆ Start training early.
- ◆ Understand the full stack.
  - ◆ Database, Utility, APS, etc.
- ◆ Work through errors ahead of time.





# Phase II: The Upgrade

# Upgrading the App Database

...

- ◆ Can I set a go-live date yet?
  - ◆ **No.**
- ◆ Why not?
  - ◆ This is one of the hardest areas to predict.
  - ◆ Infor will likely need to get involved.
  - ◆ It took us 9 attempts to get a successful upgrade.
  - ◆ Delays in this area can rush testing and go-live.



# Upgrade Attempts:

...

- ◆ Attempt 1: **Failed.**
  - ◆ Set Compatibility to 2016 and enabled CLR.
- ◆ Attempt 2: **Failed.**
  - ◆ Set TRUSTWORTHY ON and changed DB Owner to SA
- ◆ Attempt 3: **Failed.**
  - ◆ Installing on SQL 2016 requires APAR SL224400
- ◆ Attempt 4: **Failed.**
  - ◆ Installed Full-Text Search





# Upgrade Attempts (Continued)

...

- ◆ Attempt 5: **Failed.**
  - ◆ Gave up and called Infor
  - ◆ Paula Ponsonby provided the holy grail of upgrades.
    - ◆ [Upgrade Phases\\_CSI90100.docx](#)
  - ◆ Don't try to upgrade without this document.
    - ◆ Submit an incident.
- ◆ Attempt 6: **Failed.**
  - ◆ Had to drop PK\_RS\_QCProcessXRef\_mst prior to upgrading.



# Upgrade Attempts (Continued)

...

- ◆ Attempt 7 & 8: **Failed.**
  - ◆ There were unnecessary tabs in the UpgradeSettings.xml file.
- ◆ Attempt 9: **Success!!**

# Plan for Go-Live

...

- ◆ *Now* can I plan my go-live?
  - ◆ **Yes.**
- ◆ Make time for merging customizations
  - ◆ You have a list now, so plan accordingly.
- ◆ Make time for testing your merges
- ◆ Make time for user testing and validation
- ◆ Then, give yourself the biggest deployment window possible.





# Phase III: Merging Customizations

# Feature Freeze!

...

- ◆ Finish all Customization Projects in your old system.
  - ◆ If it's close enough to finished, get it through.
  - ◆ If it's only sorta started, postpone until after.
  - ◆ Don't start new projects.
- ◆ You will only make one copy of Forms and Objects.
  - ◆ Changes made after this point must be re-implemented **manually**.



# Upgrading Forms

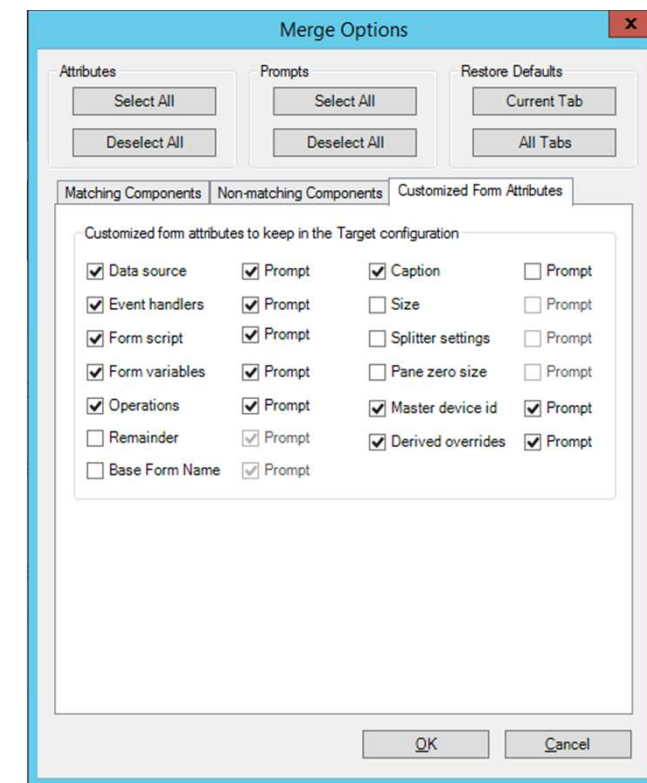
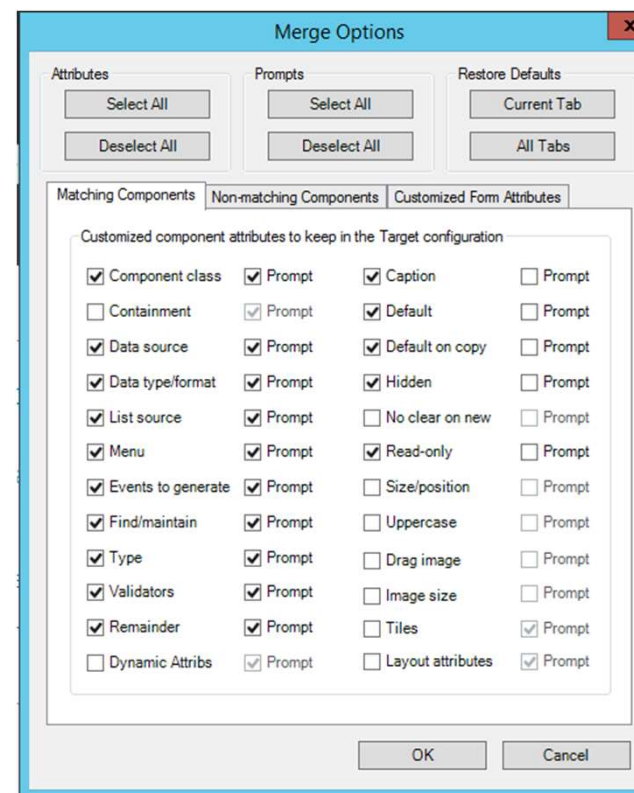
...

- ◆ Must be done in a specific order.
  - ◆ Create an Out of the Box Forms Database (9.01)
    - ◆ Install all applicable patches against Forms Database.
  - ◆ Restore a backup of your old Forms Database (9.00)
  - ◆ Upgrade the old Forms Database
    - ◆ This does NOT change any forms!
  - ◆ Run FormSync
    - ◆ Source: Out of the box configuration
    - ◆ Target: Your upgraded configuration



# FormSync Configuration

- ◆ Since Infor introduced Flexlayouts, some forms changed significantly. (Items, Customers, etc.)
  - ◆ Configure FormSync to remove all customizations to component positioning.
  - ◆ Dynamic Attributes can also create many prompts.
- ◆ Remove Doc-Trak Code prior to FormSync





# Some FormSync Hints...

...

- ◆ FormSync doesn't always provide good context.
- ◆ Run two instances of FormSync!
  - ◆ One handles the merge
  - ◆ The other is available for using the Comparison tab.
  - ◆ This allows you to view context when making merge decisions.
- ◆ XML export (9.01 only) is awesome.
  - ◆ You can now export Vendor and Site, merge, and re-import!

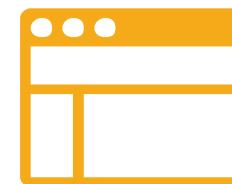


# QCS Problems

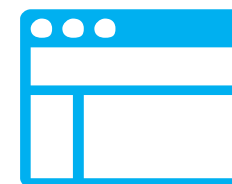
...

- ◆ In 9.01, QCS was integrated into SyteLine.
- ◆ QCS Forms were renamed from RS\_QC\_*Form* to QC\_*Form*.
  - ◆ This kills FormSync.
  - ◆ FormSync sees the new QC forms as completely unrelated.
- ◆ Note that this also breaks your permissions.

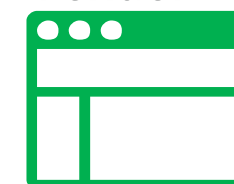
RS QC  
Site



RS QC  
Vendor



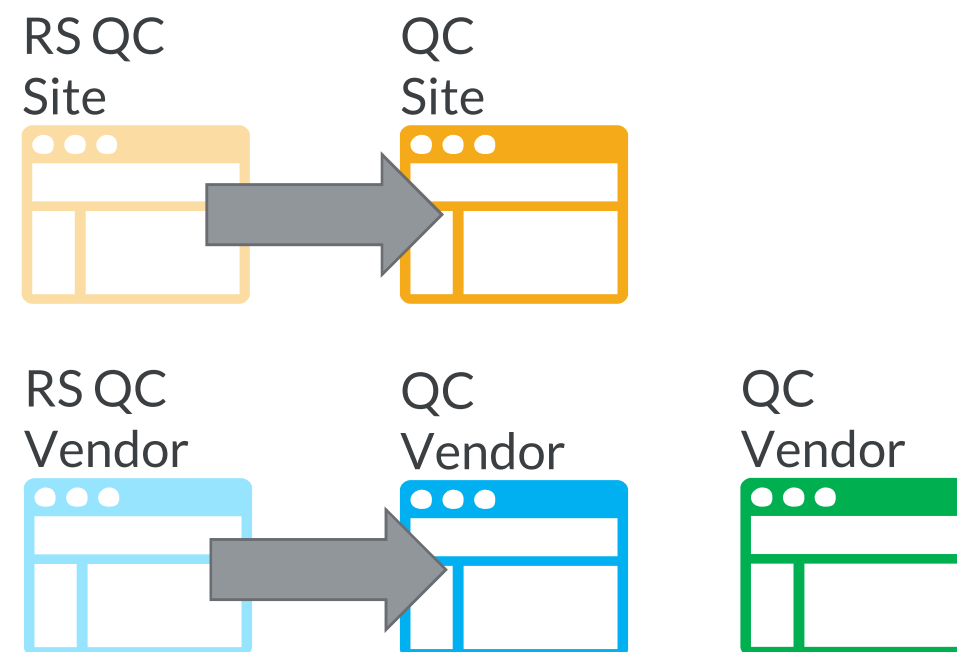
QC  
Vendor



# QCS Fix

...

- ◆ *Prior to FormSync* launch the old (upgraded) version of the Forms Database
- ◆ Copy all Site RS\_QC forms to the new QC names.
- ◆ Change Edit Level to 4
  - ◆ Note that this is dangerous.
  - ◆ Copy all Vendor RS\_QC forms to the new QC names.
  - ◆ Delete RS\_QC versions.
- ◆ FormSync!



# SSRS and SQL Code

...

- ◆ Works the same way as FormSync.
  - ◆ Script out the old Vendor version.
  - ◆ Script out the old customized version.
  - ◆ Script out the new Vendor version.
- ◆ Use a three-way merge utility to create a merged file.
- ◆ Import and test!



# Cut Corners Cause Problems.

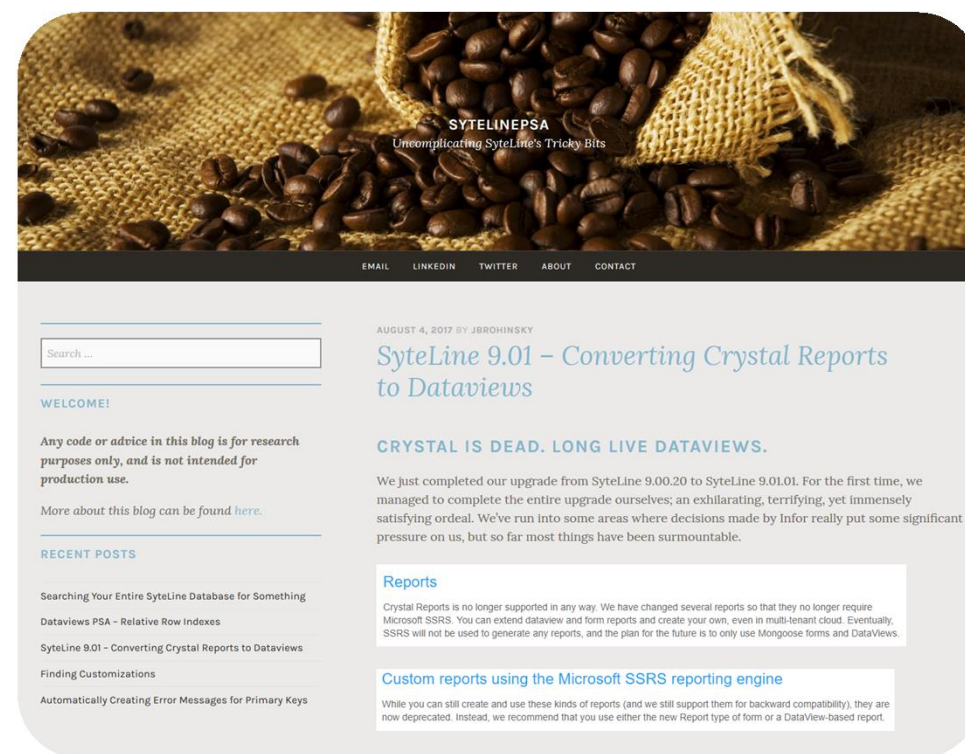
...

- ◆ When we went from 8.02.11 to 9.00.20, we didn't merge all SQL code.
  - ◆ If it worked, why mess with it?
- ◆ This meant that some of our custom SQL code was still based off of 8.02.11!
  - ◆ This made three-way merging unnecessarily difficult.
  - ◆ The only way to know if we made the change or Infor, was to reverse-engineer the customization.



# Crystal to Dataview Conversion

- ◆ The biggest time-sink was moving off of Crystal Reports.
  - ◆ Not supported in 9.01+
- ◆ We developed a process to migrate these to Dataviews.
  - ◆ <https://sytelinepsa.com>
  - ◆ “Convert Crystal Reports to Dataviews”

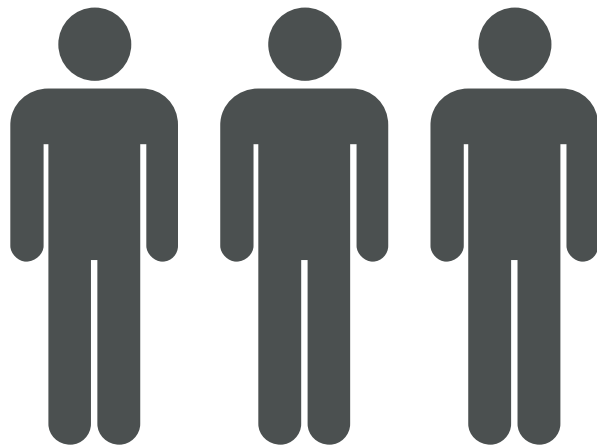


# Merging Customizations: Scope of Effort

36

...

3 IT Guys



**2.5 Weeks**

**2 Man-Hours/  
Customization**





# Phase IV: Testing and Going Live!

# Testing... 1, 2, 3...

...

- ◆ Test as you go!
  - ◆ The highest risk for breakage are the things you have to merge.
- ◆ End User Validation
  - ◆ Get the Users in the System
  - ◆ Does this meet your intended requirements?
- ◆ Use a ticketing system!
  - ◆ Let users submit issues.
  - ◆ Fix/Defer to Infor as needed.



# Testing... 1, 2, 3...

...

- ◆ User Testing isn't perfect.
  - ◆ Most Users aren't software QA specialists.
- ◆ Some users won't test at all.
  - ◆ Turn on Audit Logging
  - ◆ Get Signoffs.
- ◆ Prioritize Bugfixes
  - ◆ Shipping Product > Receiving Money > Everything Else.



# Going Live

...

- ◆ Dress Rehearsal
  - ◆ Have at least one full upgrade run before going live.
  - ◆ Have a plan, follow the plan.
- ◆ Test Destructively
  - ◆ Take a snapshot, play around, roll-back to your snapshot.
  - ◆ Did I mention Virtual Machines are awesome?
- ◆ Don't fear the Rollback
  - ◆ If it all blows up, turn on your old system on Monday.





# What We Learned

# What we got right

...

- ◆ Getting the process worked out ahead of time
- ◆ Getting the Upgrade Steps document from Infor
- ◆ Knowing what we were up against
- ◆ Not cutting corners
- ◆ Staying (mostly) relaxed
- ◆ Having a backup plan and large deployment window



# What we would do differently

...

- ◆ Not tracking time
  - ◆ We *think* the project took ~500 man hours.
  - ◆ Start a project, track your time.
- ◆ Not going to Infor sooner during the upgrade process
- ◆ Clean up more Technical Debt
  - ◆ We focused on conflicts, not straight custom code.
- ◆ InforOS was too much to tackle at once.





Questions?  
<https://sytelinepsa.com>