

Your going to do what with my data? Don't you dare say the C word!

- **Why Consider Sharing PLM Data**
- **Case Studies**
- **How To Get it Done!**



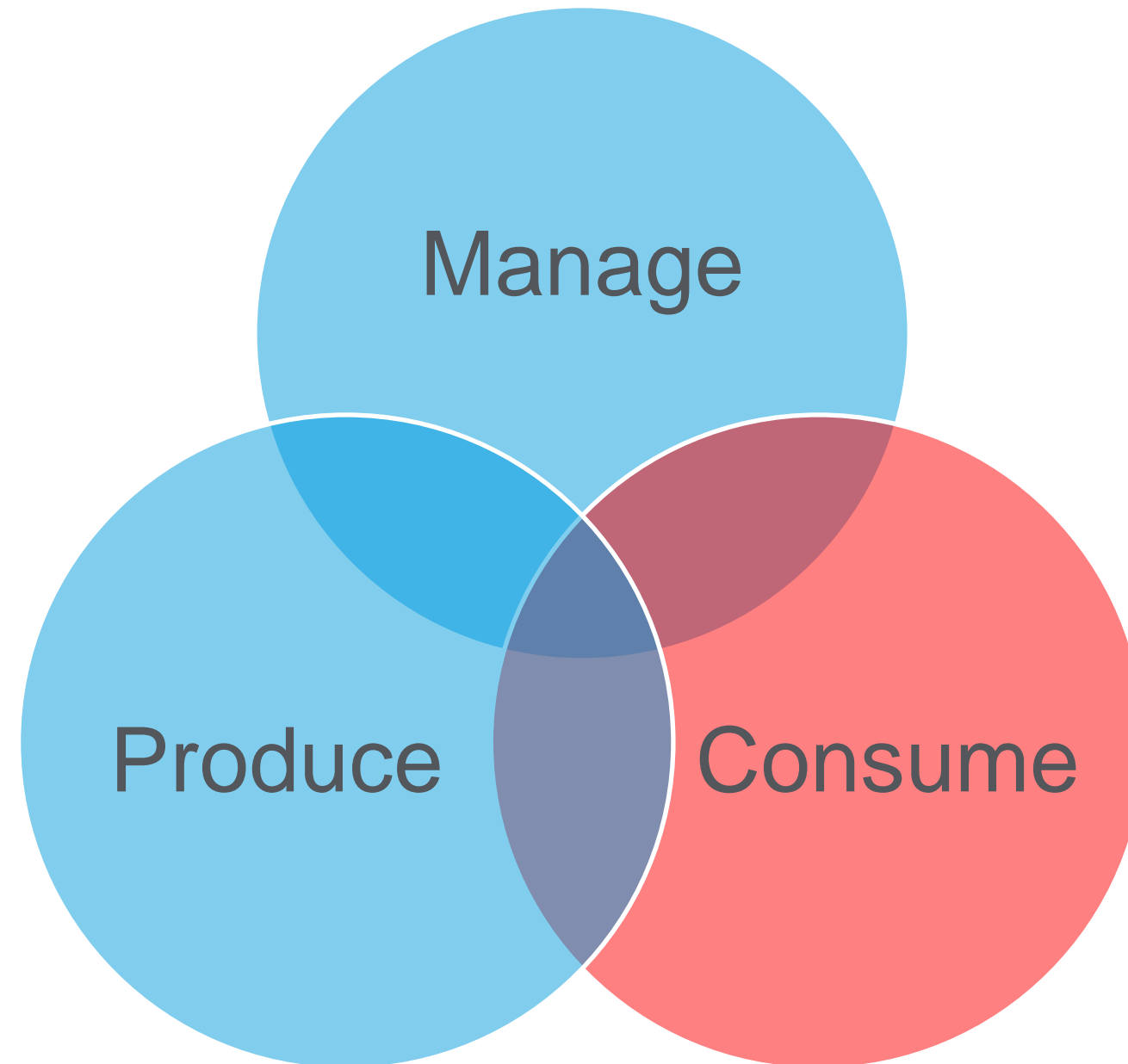
Unlock Data and Deliver on the Promised Value of PLM



- Increase Corporate Capabilities
- Eliminate Process Bottlenecks
- Drive Organization Maturity

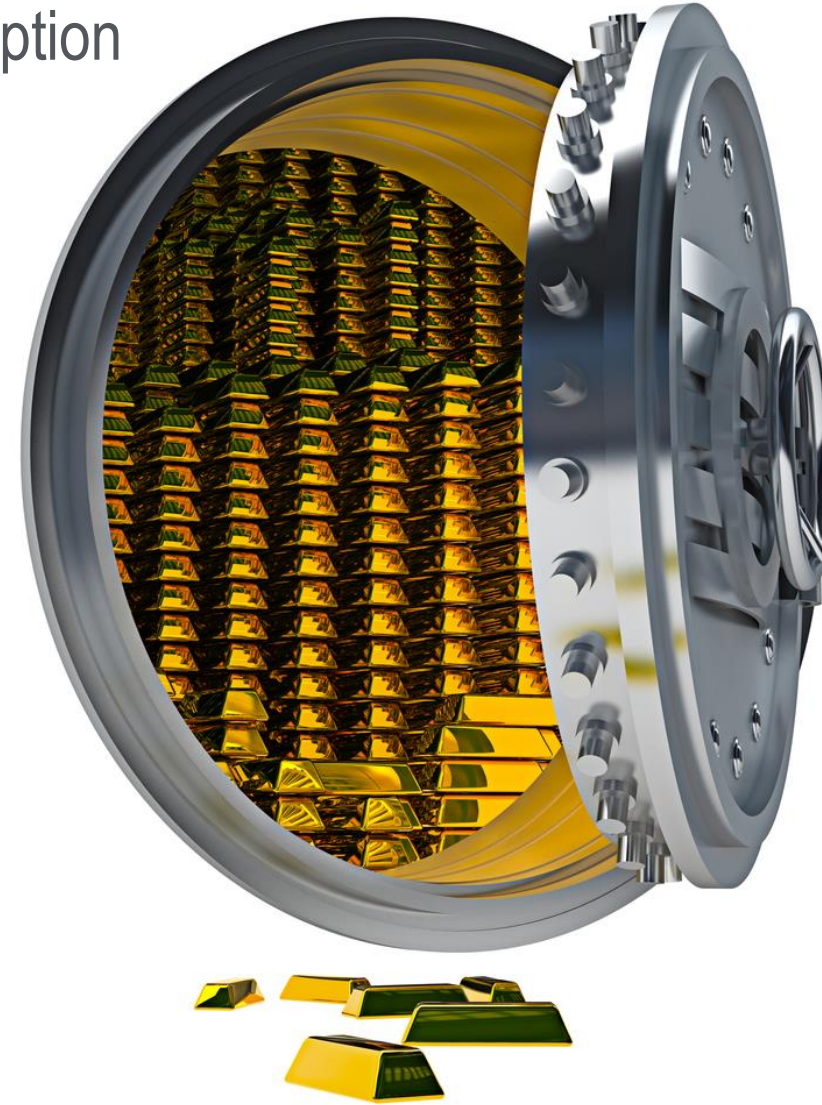


Is Data Consumption a Focus of your PLM Strategy?



Top 5 reasons “Just add user(s) to PTC Windchill” is not an option

1. Software Licensing Costs
2. Software Too Complicated
3. Local Data Required
4. Windows Fileshare Required
5. I like the tool(s) I have



- **Challenge**

- Multi CAD Environment
- Inconsistent Project Data Production
 - Not all data checked into PTC Windchill correctly
 - Correct Visualization data not always available

- **Requirements**

- Develop Project Data Health Monitor/Scorecard
- No New Licensing Costs
- Delivery Data in Existing Business Intelligence System



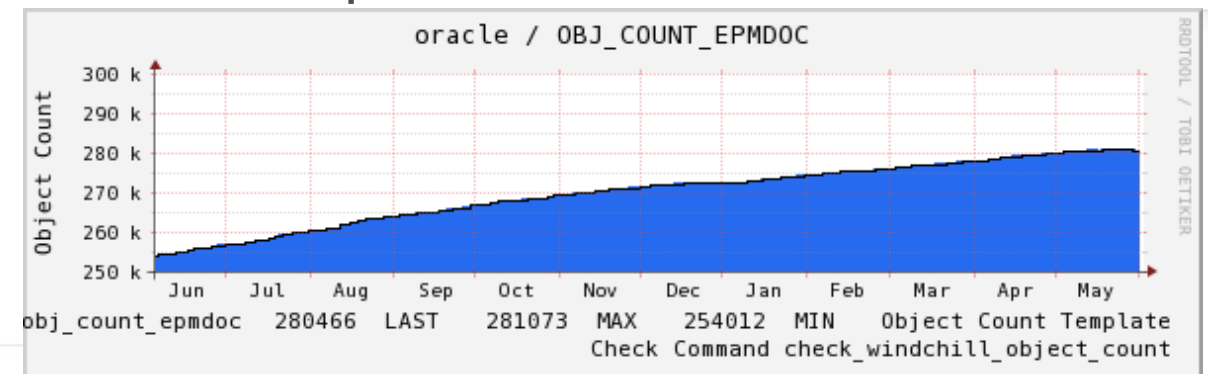
Solution: Connect Existing Business Intelligence System to PTC Windchill

- **Project Data Health Scorecard**

- Data Production: Hours Worked (Time Tracking) vs EPMDocument Check Ins
- Project Deliverables: Project Portfolio Management Linked to WTDocuments & Packages
 - Project Status Reports – WTDocuments
 - Deliverables - Packages

- **Data Quality**

- Ensure All Released EPMDocuments have Valid Visualization Representation
 - Tables: EPMDocument and DerivedImage
- Ensure State of Project Data matches Project Phase
 - Tables: EPMDocument, WTPart, WTDocument

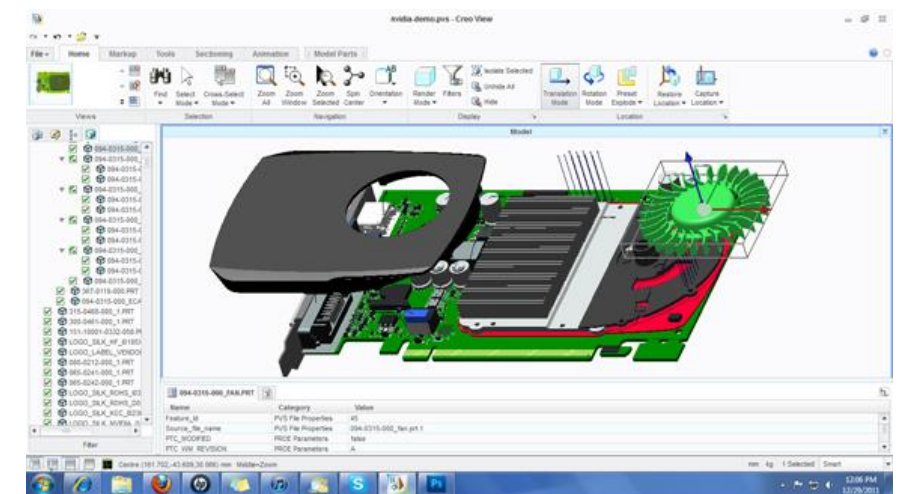
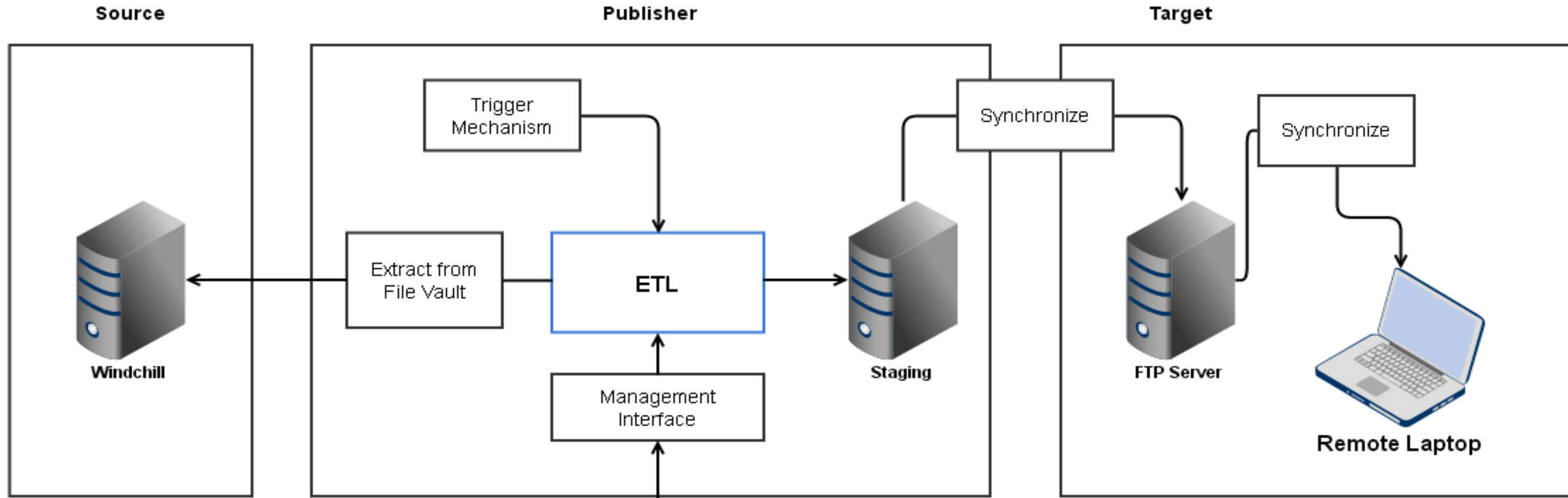


- **Challenge**
 - Out of Data 2D Product Documentation
 - Difficult to Identify Purchasable Components
 - Strategic Initiative to Lower Cost of Field Service
- **Requirements**
 - Deliver Timely 3D Product Data
 - No New Licensing Costs
 - No Internet In Field
 - Keep it Simple



Case 2: Field Service Challenge

Solution: Local access to Latest Released PTC CreoView Representation



Key Features

- **Decreased Data Refresh Cycle**
 - Service data update drops from 1 Year to 1 Day
- **Moved from 2D to 3D**
- **Leveraged Existing Infrastructure**
 - FTP Already in Use
- **Broke Down Data Silos**
 - Part information Linked Engineering to Service
- **No Additional Software Licenses Required**
- **Data Available locally on Laptop**



- **Challenge**

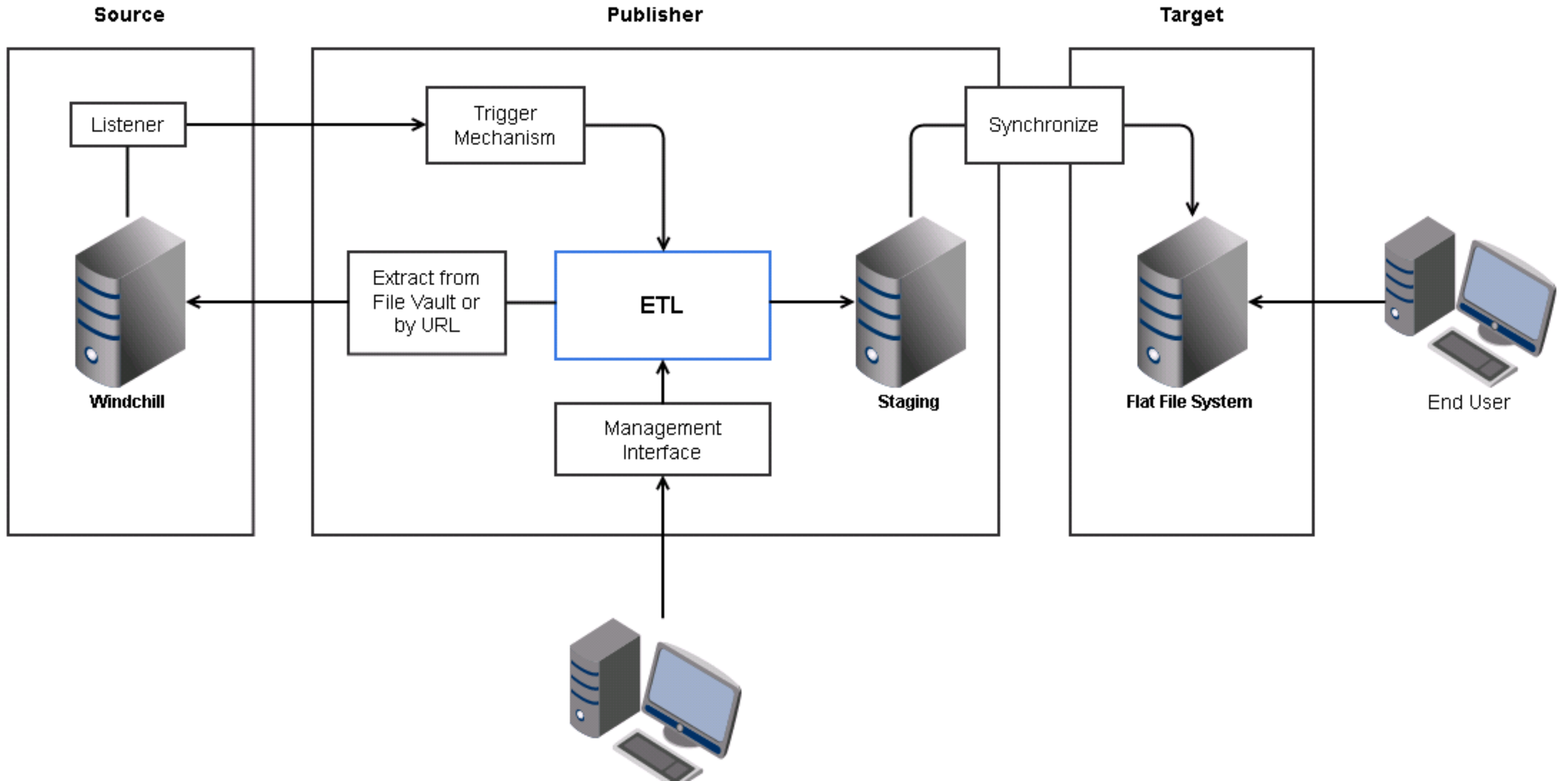
- Machine Code on Network Share
- Existing PTC Windchill System
- CAD & BOM Under Change Control
- No Single Source of Truth

- **Requirements**

- Control Machine Code in PTC Windchill
- Deliver Data on Windows Share
- No New Licensing Costs
- Keep it Simple for the Operator
- Limit Dependency on WAN



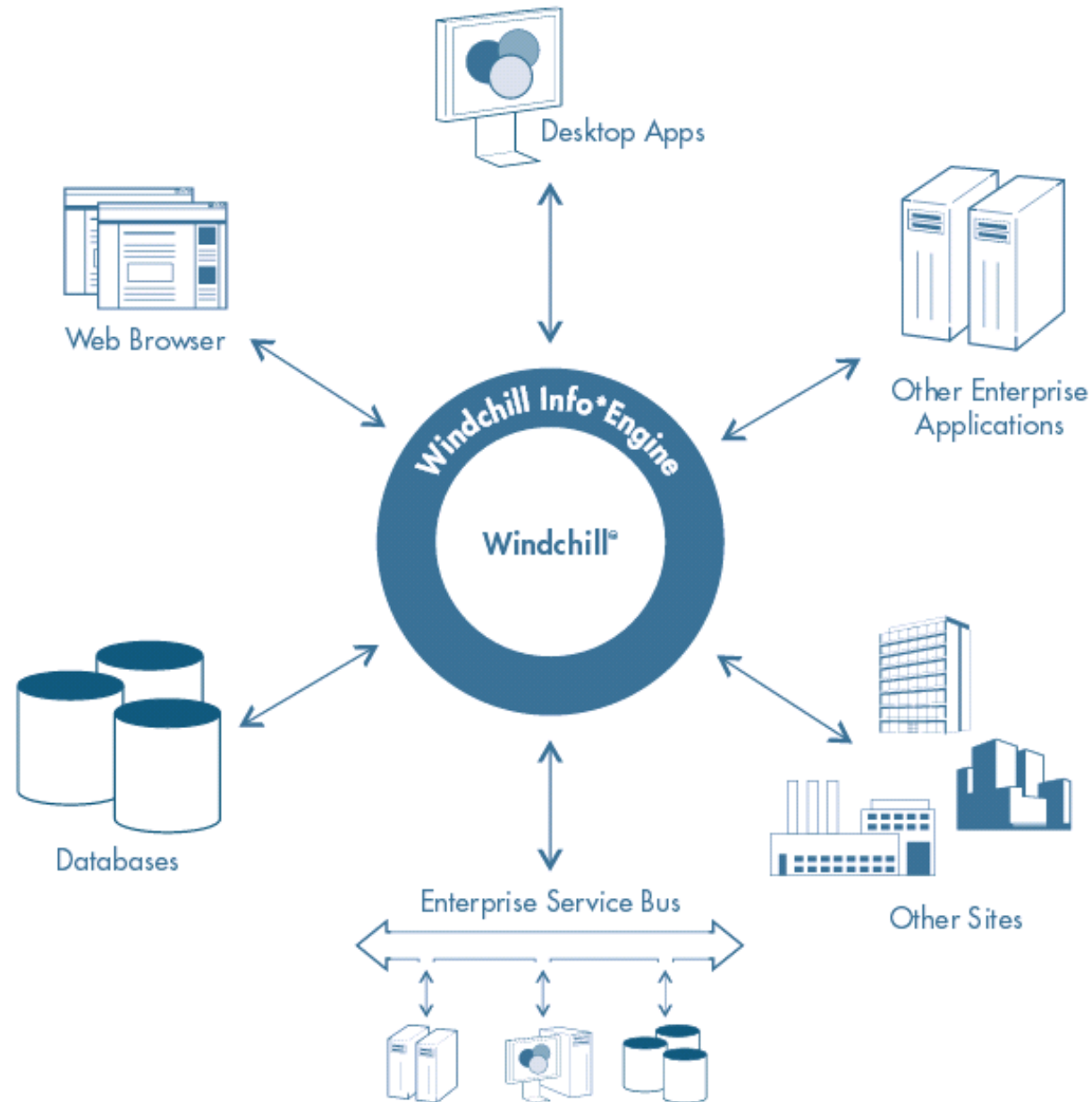
Solution: Track data as WTDocuments and published Released data to Windows Share



Key Features

- **No Change to Operator Work Process**
- **Single Source of Truth**
 - Consistent Change Control: CAD to Machine Code
- **Business Logic Consolidated in ETL Layer**
 - Administration of system controlled outside of PTC Windchill
- **Data Stored Locally**
- **Maximize System Data Throughput Speed & Storage**
 - Directly access files in filevault
 - Leveraged file system hard links

Info*Engine



- **Features**

- Service-Oriented Architecture (SOA)
- Web Services (SOAP, WSDL)
- Webjects
- Bi-Directional
- Transaction Management

- **What it takes**

- Additional Licensing Cost
- Specialized Skills
- Middleware must be added
- \$\$\$\$\$

Java



- **Features**
 - PTC Windchill Listener
 - PTC Windchill Workflow
 - Command Line
 - Business Logic can be included
- **What it takes**
 - Specialized Skills
 - PTC Windchill development environment
 - Is it a CUSTOMIZATION?
 - \$\$\$\$\$

SQL + Extract, Translate, Load

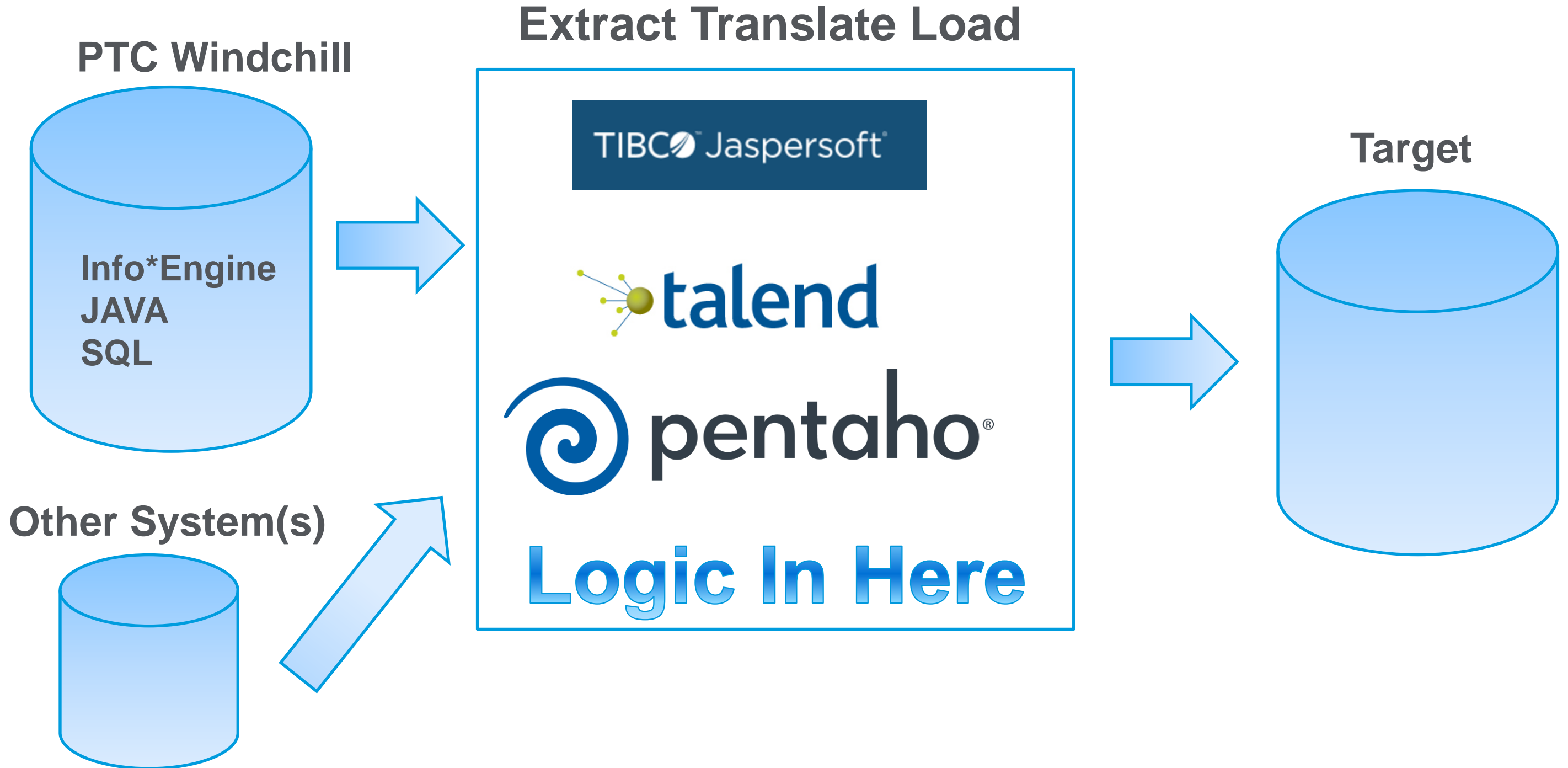


- **Features**

- Integrate Data from Any System
- Separates Business Logic from Application(s)
- Execute from any trigger
 - Scheduled (cron, Windows Scheduler)
 - Workflow
 - Listener
 - Web call

- **What it takes**

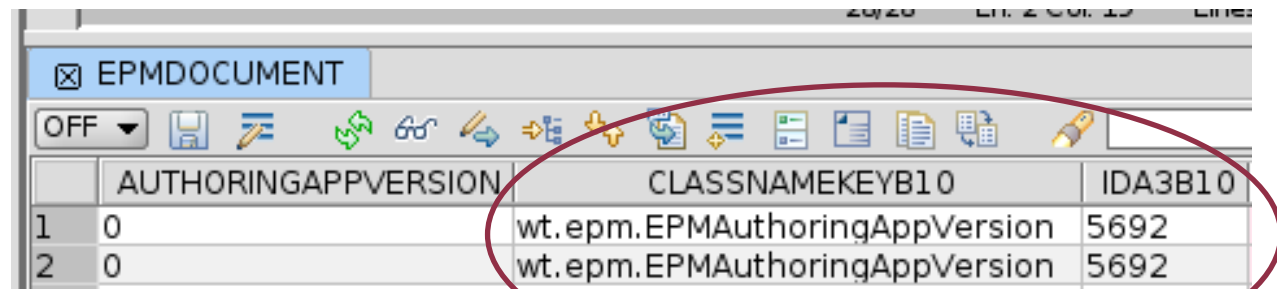
- Generic SQL Skills
- ETL tool
- \$



Database Reporting Resources

- PTC Windchill Table Relationships
 - <https://support.ptc.com/appserver/cs/view/solution.jsp?n=CS51689>
- Object Links
 - <https://support.ptc.com/appserver/cs/view/solution.jsp?n=CS131357>
 - <https://support.ptc.com/appserver/cs/view/solution.jsp?n=CS53948>
- Family Table Links:
 - <https://support.ptc.com/appserver/cs/view/solution.jsp?n=CS29111>
- Change Object Database Map:
 - <https://support.ptc.com/appserver/cs/view/solution.jsp?n=CS63595>
- Community Reporting Resources Summary
 - <https://www.ptcusercommunity.com/docs/DOC-6348>

- IDA2A2 – Table Unique ID Field
- CLASSNAMExxx and ida3xxx columns work in pairs
 - CLASSNAMExxx - Tables being referenced
 - IDA3xx – reference IDA2A2 value in those tables
- Example: EPMDocument to CAD Authoring Tool



	AUTHORIZINGAPPVERSION	CLASSNAMEKEYB10	IDA3B10
1	0	wt.epm.EPMAuthoringAppVersion	5692
2	0	wt.epm.EPMAuthoringAppVersion	5692

IDA3B10=IDA2A2



	AUTHORIZINGAPPLICATION	IDA2A2
1	PROE	5692

What does this Query Do?

STRINGVALUE Table

```
1 SELECT CLASSNAMEKEYA6, IDA3A6, CLASSNAMEKEYA4, IDA3A4, CLASSNAMEA2A2, IDA2A2, VALUE2 FROM STRINGVALUE WHERE IDA3A4 = 153942;
```

29/124 Ln. 1 Col. 30 Lines: 1 INSERT WRITABLE \n UTF8 Delimiter: ;

☒ STRINGVALUE



	CLASSNAMEKEYA6	IDA3A6	CLASSNAMEKEYA4	IDA3A4	CLASSNAMEA2A2	IDA2A2	VALUE2
1	wt.iba.definition.StringDefinition	106215	wt.epm.EPMDocument	153942	wt.iba.value.StringValue	156301	MWM
2	wt.iba.definition.StringDefinition	106217	wt.epm.EPMDocument	153942	wt.iba.value.StringValue	156302	316 STAINLESS
3	wt.iba.definition.StringDefinition	106543	wt.epm.EPMDocument	153942	wt.iba.value.StringValue	156303	
4	wt.iba.definition.StringDefinition	106545	wt.epm.EPMDocument	153942	wt.iba.value.StringValue	156304	
5	wt.iba.definition.StringDefinition	106563	wt.epm.EPMDocument	153942	wt.iba.value.StringValue	156305	
6	wt.iba.definition.StringDefinition	106571	wt.epm.EPMDocument	153942	wt.iba.value.StringValue	156306	MWM
7	wt.iba.definition.StringDefinition	106573	wt.epm.EPMDocument	153942	wt.iba.value.StringValue	156307	
8	wt.iba.definition.StringDefinition	106575	wt.epm.EPMDocument	153942	wt.iba.value.StringValue	156308	N/A

Perform UI action & capture PTC Windchill SQL

- **Method Server SQL Debug Mode**

- <https://support.ptc.com/appserver/cs/view/solution.jsp?n=CS16259> – How to enable/disable
- Enable logger: windchill wt.util.jmx.SetLogLevel -ms wt.pom.sql DEBUG
- Disable logger: windchill wt.util.jmx.SetLogLevel -ms wt.pom.sql ERROR

- **PTC Windchill Profiler**

- https://www.ptc.com/view?im_dbkey=106486

- **PTC Windchill System Monitor**

- PSM/Dynatrace

Using the PTC Windchill Profiler www.ptc.com/view?im_dbkey=106486

PTC Windchill System Monitor (PSM/Dynatrace)

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