ACE 2019
INNOVATE
TRANSCEND
REALIZE

Component Engineering

What's New?
Microsoft Use Case

Craig Currie – Product Manager Aras Corp.
Michel Henninot – Microsoft Corp.

4/16/2019

What is Component Engineering anyway?

ACE 2019
INNOVATE
TRANSCEND
REALIZE

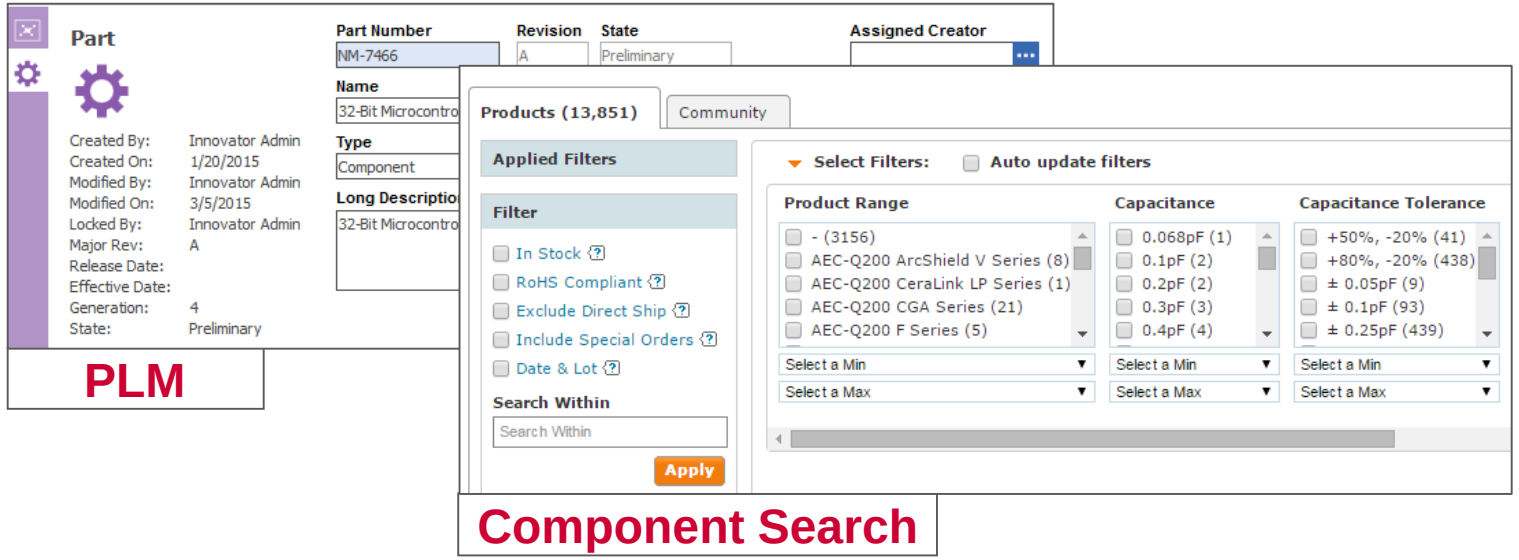
“Buy” parts management

Needs

- Technical information
- Obsolescence management
- Product changes in components
- Compliance management
- Alternates

Challenges

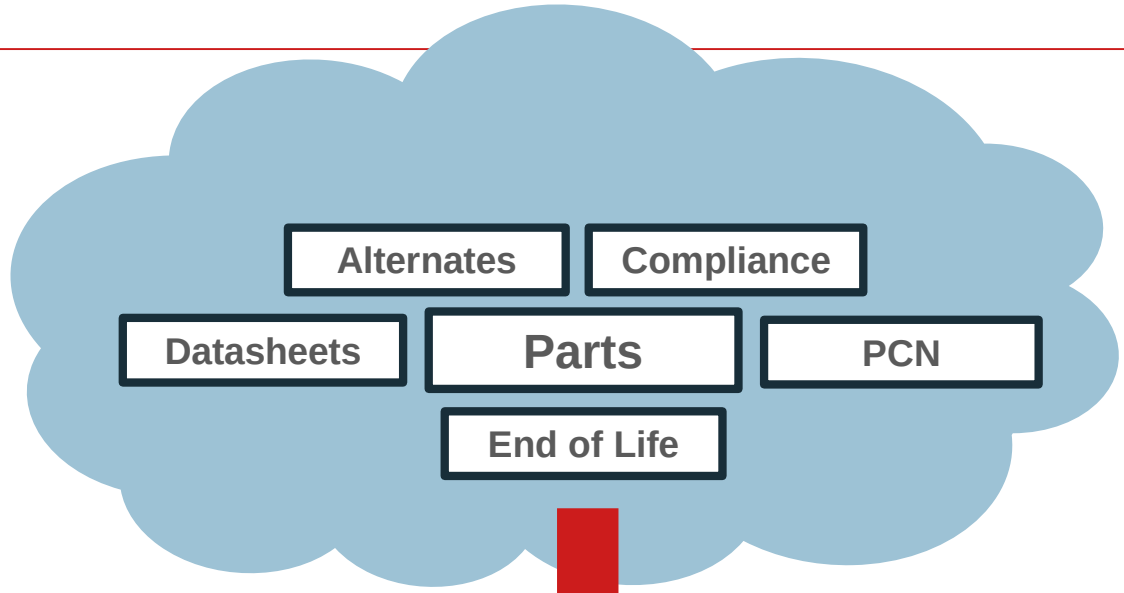
- Disconnected sets of data
- “Manual” integration
- Static information
- No integration with Procurement or Manufacturing

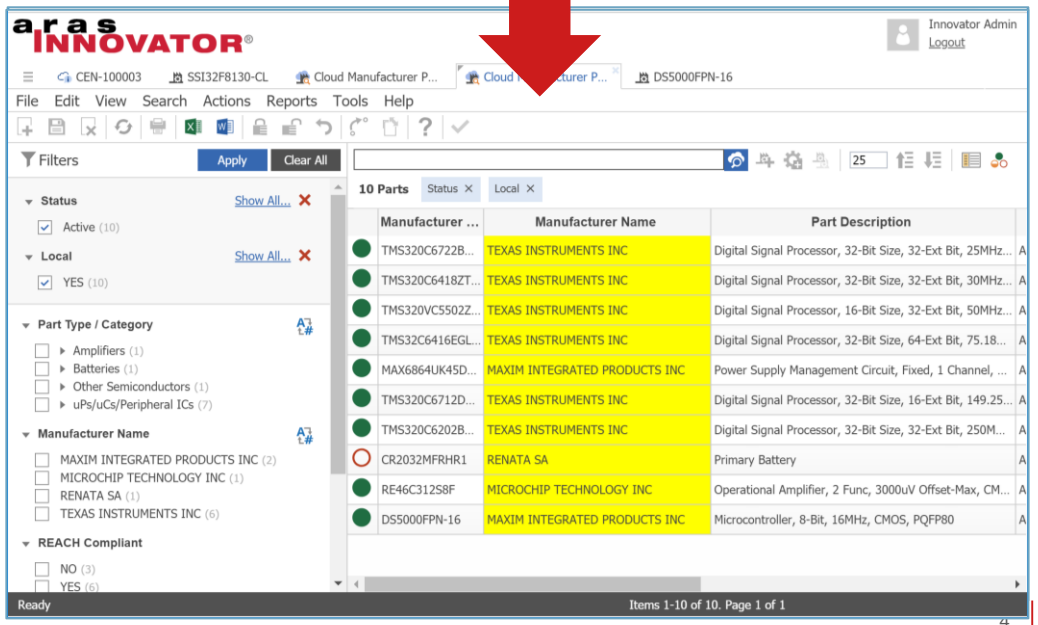


© 2018 Aras

Component Engineering

- Bringing “live” component data into PLM
- Data is updated
- Seamless, rich user experience
- Visibility into parts used
- Part Request workflows





- CE first introduced in 2014 (10 R1)
- Major update in 11 R6
- Fixes and performance in 11 R7

© 2018 Aras

What's New?

ACE 2019
INNOVATE
TRANSCEND
REALIZE

What's New?

Improved Search UX

Persisted Data

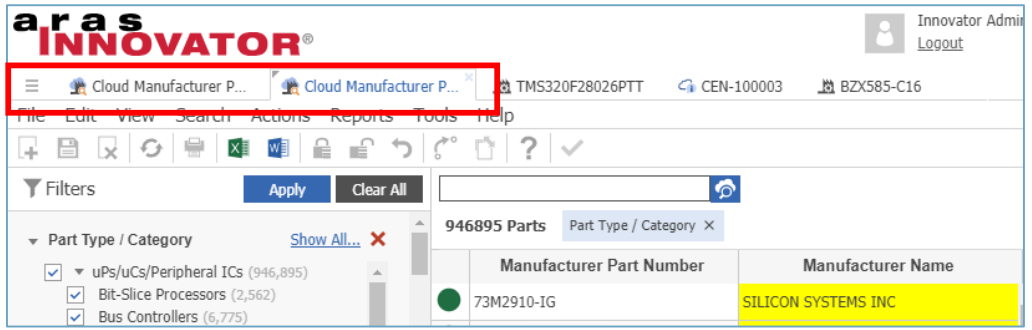
Update Notices

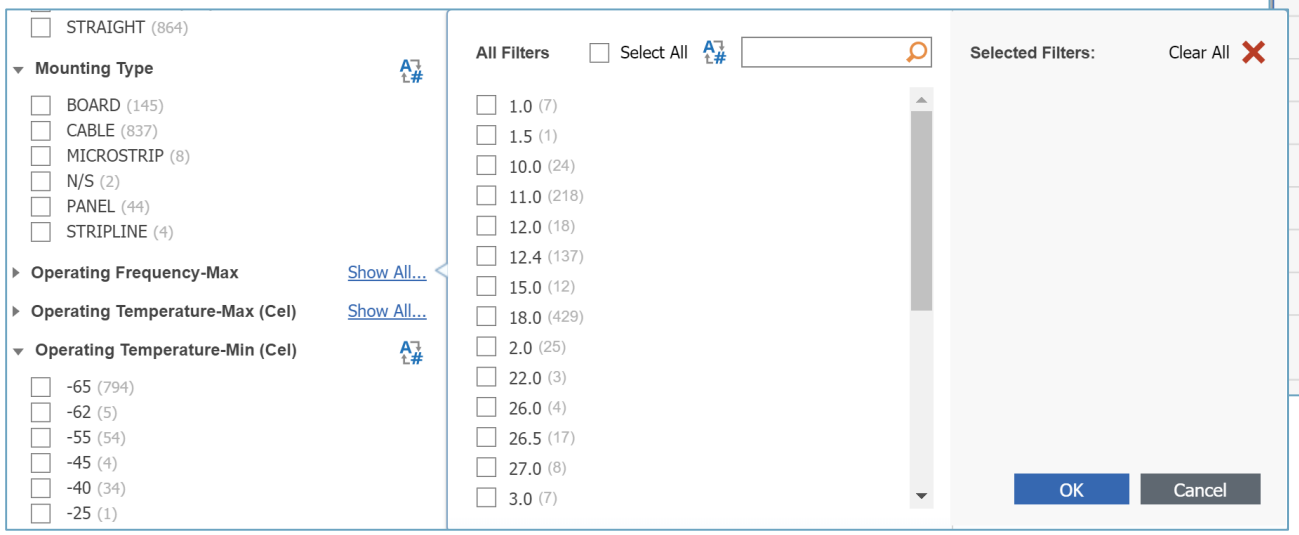
Change History

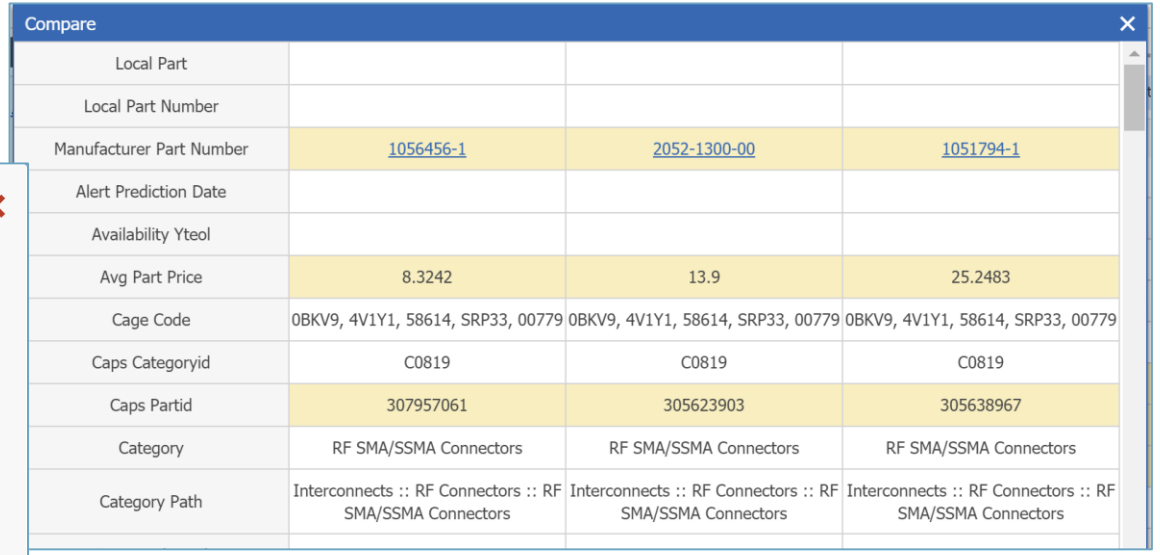
© 2018 Aras

Improved Cloud Search UX

- Multiple Search/Results Tabs
- Clearer display of Filters
- Sort Filter values Alphabetically or by Count
- View complete set of information from Results
- Improved Part Compare



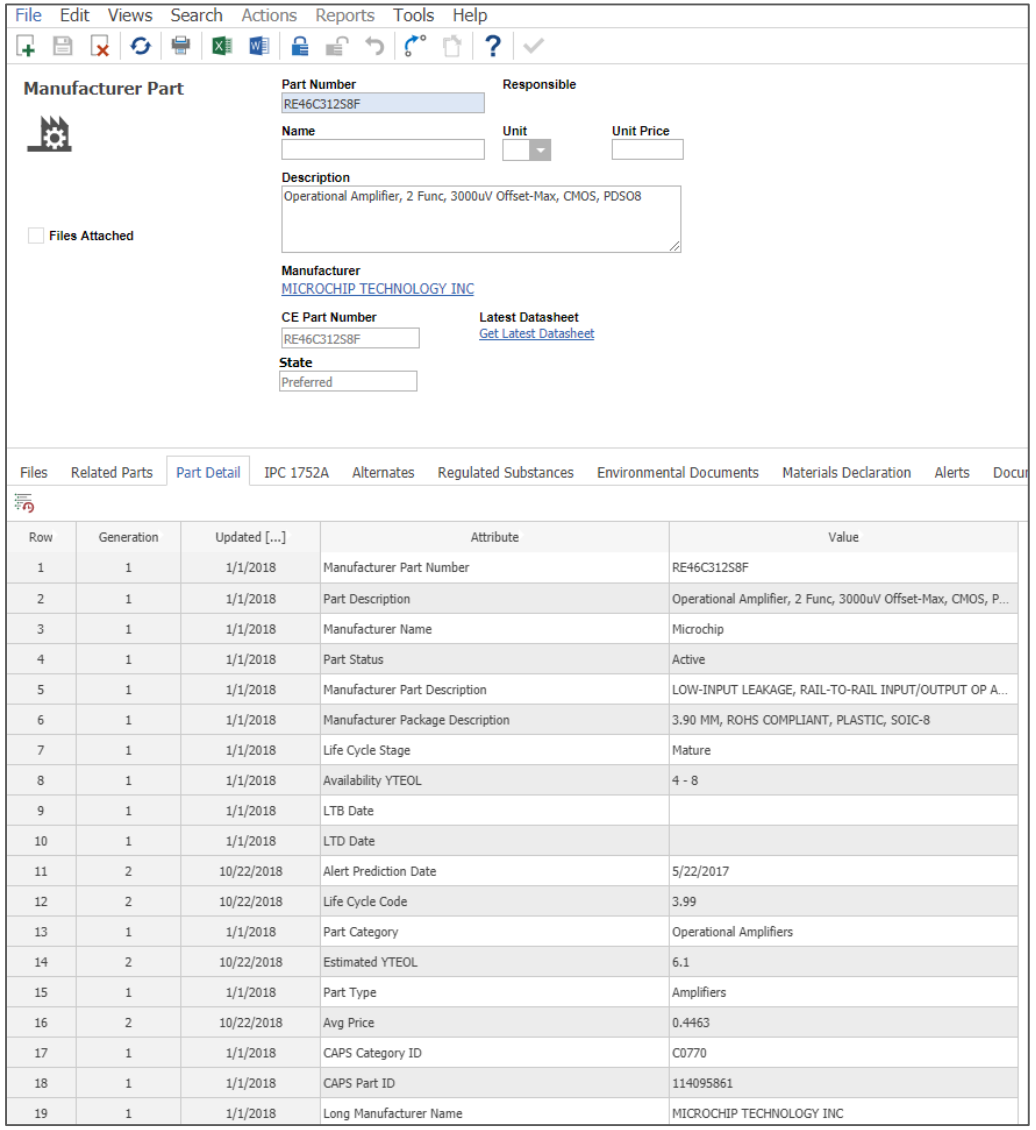




© 2018 Aras

Persisted Data

- Data persisted in Aras Innovator
  - **Except** Alternates, Transfers and Files
- Updated based on Schedule
- Part Details use Extended Classification

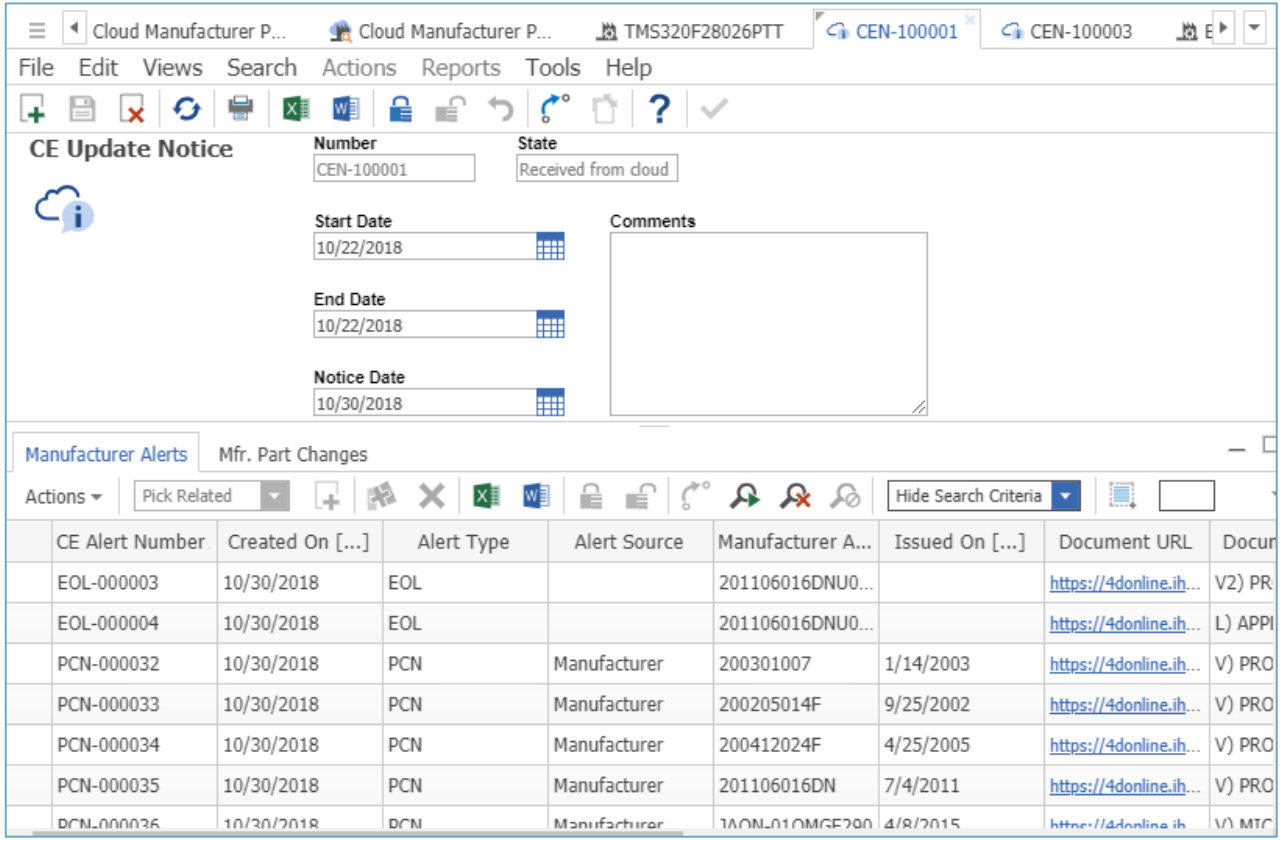


Row	Generation	Updated [...]	Attribute	Value
1	1	1/1/2018	Manufacturer Part Number	RE46C312S8F
2	1	1/1/2018	Part Description	Operational Amplifier, 2 Func, 3000uV Offset-Max, CMOS, P...
3	1	1/1/2018	Manufacturer Name	Microchip
4	1	1/1/2018	Part Status	Active
5	1	1/1/2018	Manufacturer Part Description	LOW-INPUT LEAKAGE, RAIL-TO-RAIL INPUT/OUTPUT OP A...
6	1	1/1/2018	Manufacturer Package Description	3.90 MM, ROHS COMPLIANT, PLASTIC, SOIC-8
7	1	1/1/2018	Life Cycle Stage	Mature
8	1	1/1/2018	Availability YTEOL	4 - 8
9	1	1/1/2018	LTB Date	
10	1	1/1/2018	LTD Date	
11	2	10/22/2018	Alert Prediction Date	5/22/2017
12	2	10/22/2018	Life Cycle Code	3.99
13	1	1/1/2018	Part Category	Operational Amplifiers
14	2	10/22/2018	Estimated YTEOL	6.1
15	1	1/1/2018	Part Type	Amplifiers
16	2	10/22/2018	Avg Price	0.4463
17	1	1/1/2018	CAPS Category ID	C0770
18	1	1/1/2018	CAPS Part ID	114095861
19	1	1/1/2018	Long Manufacturer Name	MICROCHIP TECHNOLOGY INC

© 2018 Aras

Update Notices

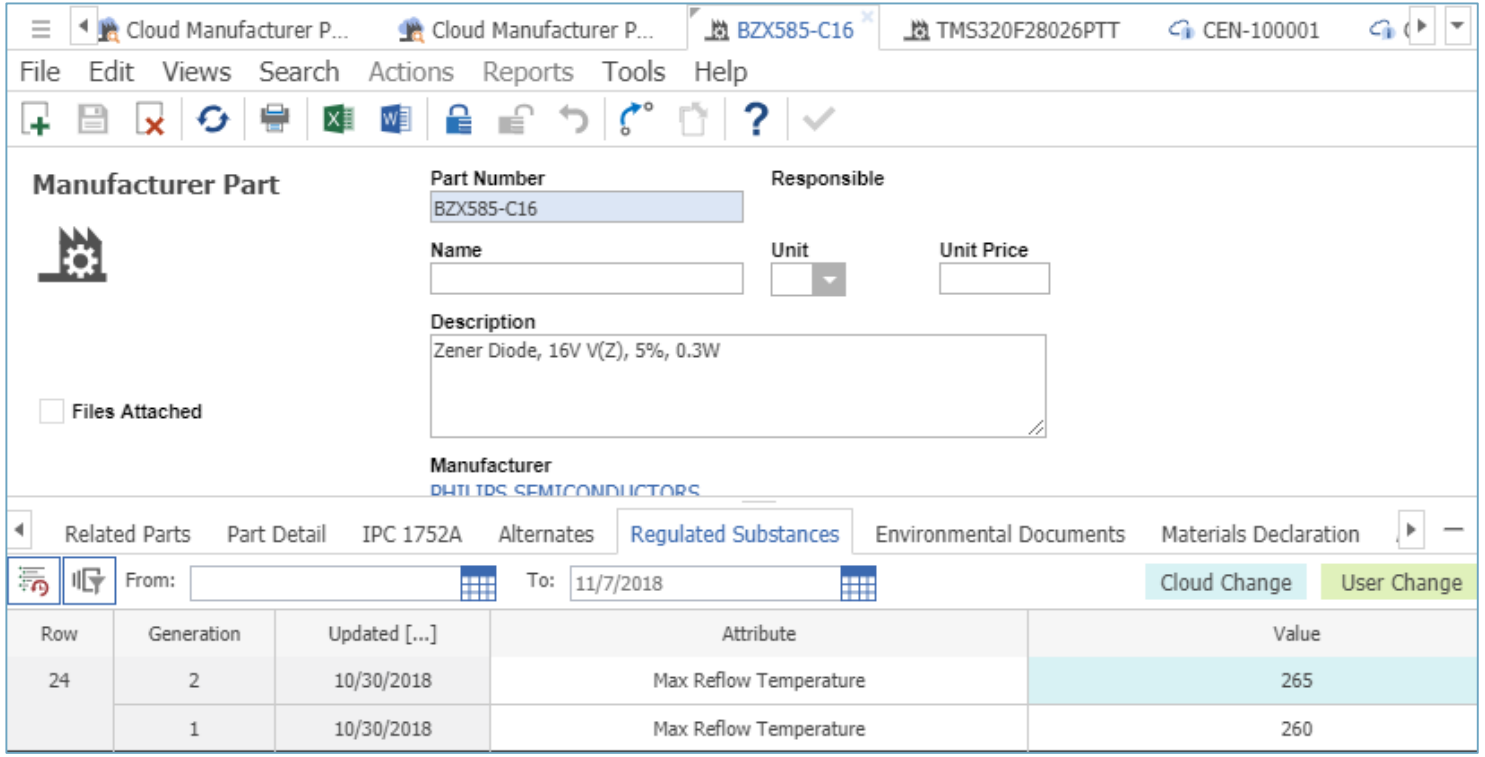
- Notices created when data updated
- Manufacturer Alerts
  - End Of Life (EOL)
  - Product Change Notice (PCN)
  - Product Failure Notice (PFN)
  - Product Status Change (PSC)
- Manufacturer Part Changes



© 2018 Aras

Change History

- Manufacturer Part Changes
  - Color Coding
  - Cloud Changes
  - Local (User) Changes
- Filter by date



© 2018 Aras

Future Direction

Mechanical Parts

OOTB Reports

CAD Models, Footprints, Symbols

ECAD

BOM Analysis

- Compliance
- Risk
- Design Grading
- Cost, Cost avoidance

BOM What-if Analyses

© 2018 Aras

Component Engineering Demonstration

ACE 2019
INNOVATE
TRANSCEND
REALIZE

Microsoft OnePDM Aras CE End of Life Management

ACE 2019
INNOVATE
TRANSCEND
REALIZE

Microsoft

Managing Parts End-of-Life with Aras CE module and roll-up capability

Michel Henninot, Microsoft

Why? How?

arasCE™ COMPONENT ENGINEERING

IHS Markit™

Streamline and automate End of Life **information collection**

Provide End of Life risk **information for all parts**

Check EOL risk **before selecting and releasing** parts.

Designers

RollupQueue

aras

ONE

Microsoft PDM

Power BI

- ✓ Deliver products on time
- ✓ Deliver services without interruptions
- ✓ Avoid last minute emergency costly purchases
- ✓ Support long-range planning and qualification
- ✓ Manage product lifecycles pro actively

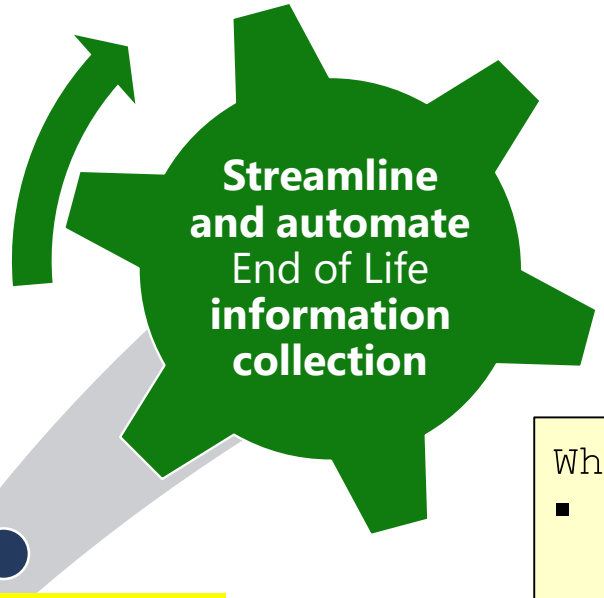
Aras CE Application

LTB Date **LTD Date** **Status** **Estimated EOL Date**

Advanced Search | Saved searches: | 50 | 9999 | Current | Today

ItemType	Property	Operation	Criteria[...]
Manufacturer Part	MPN LTB Date	≠	2019-03-01T00:00:00

Manufacturer Part Number	Manufacturer [...]	MPN LTB Date [...]	MPN LTD Date [...]	MPN Lifecycle Status	MPN Estimated YTEOL	MPN Estimated EOL Dat...	MPN Status
19-217-G7C-AL1M2B-3T	EVERLIGHT ELECTRONIC...	5/19/2014	5/19/2014	Discontinued	0	5/19/2014	Discontinued
1SMA12AT3G	LITTELFUSE	12/31/2017	6/30/2018	Discontinued	0	3/31/2017	Discontinued
1SMA12AT3G	ON SEMICONDUCTOR	12/31/2017	6/30/2018	Discontinued	0	3/31/2017	Discontinued
502426-0810	MOLEX INC.	3/18/2019	6/18/2019	Phase-Out	0.47	3/8/2019	EOL
502426-2610	MOLEX INC.	3/18/2019	6/18/2019	Phase-Out	0.47	3/8/2019	EOL
502426-4010	MOLEX INC.	3/18/2019	6/18/2019	Phase-Out	0.47	3/8/2019	EOL
502430-2610	MOLEX INC.	3/18/2019	6/18/2019	Phase-Out	0.47	3/8/2019	EOL
502430-4010	MOLEX INC.	3/18/2019	6/18/2019	Phase-Out	0.47	3/8/2019	EOL



Automatic data collection thru Aras CE I.H.S. Cloud -> on Manufacturer Parts

IHS Markit

What we customized:

- Scheduled Manufacturer Parts auto matching with CE Cloud
- Persistent Manufacturer Parts Properties

From: OnePDM
Subject: Scheduled automatic Manufacturer Part match results batch 1 of 3

Matched successfully:
04025C223KAT2A|0402B104K160CT|0402B223K500CT|C1005X7R223KGTS|CC0201KRX5R5BB104|CL03A104KQ3NNNC|CL03A104KQ3NNNC|CL05B104KO5NNNC|CL05B223KB5NNNC|CRCW0201412KFNED|CRCW0201432RFNED|ERJ1GNF4123C|ERJ1GNF4320C|ERJ2GEJ511X|GRM033R60J104KE19J|GRM033R60J104KE19J|JMK042BJ332KC-W|JMK063BJ104KP-F

Failed to match: 02015C101JAT2A|852-45382-00A|8SR-31761-00A|8SR-31762-00A|GRM155R71A104K|GRM188R71E104K|GRM31CR61C226K

Error: Manufacturer Part '02015C101JAT2A' Found 2 exact matches: Manufacturer Part Number '02015C101JAT2A' from Manufacturer 'AVX CORP', Manufacturer Part Number '02015C101JAT2A' from Manufacturer 'AVX CORP'. Item must be matched by user.

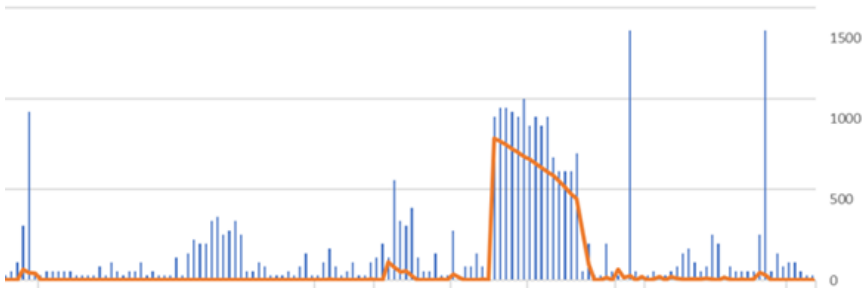
Manufacturer Part '04025C223KAT2A' (Manufacturer 'KYOCERA/AVX') Successfully matched with cloud Manufacturer Part '04025C223KAT2A' (cloud Manufacturer 'AVX CORP')

Manufacturer Part '0402B104K160CT' (Manufacturer 'WALSIN TECHNOLOGY CORPORATION') Successfully matched with cloud Manufacturer Part '0402B104K160CT' (cloud Manufacturer 'WALSIN TECHNOLOGY CORP')

Manufacturer Part '0402B223K500CT' (Manufacturer 'WALSIN TECHNOLOGY CORPORATION') Successfully matched with cloud Manufacturer Part '0402B223K500CT' (cloud Manufacturer 'WALSIN TECHNOLOGY CORP')

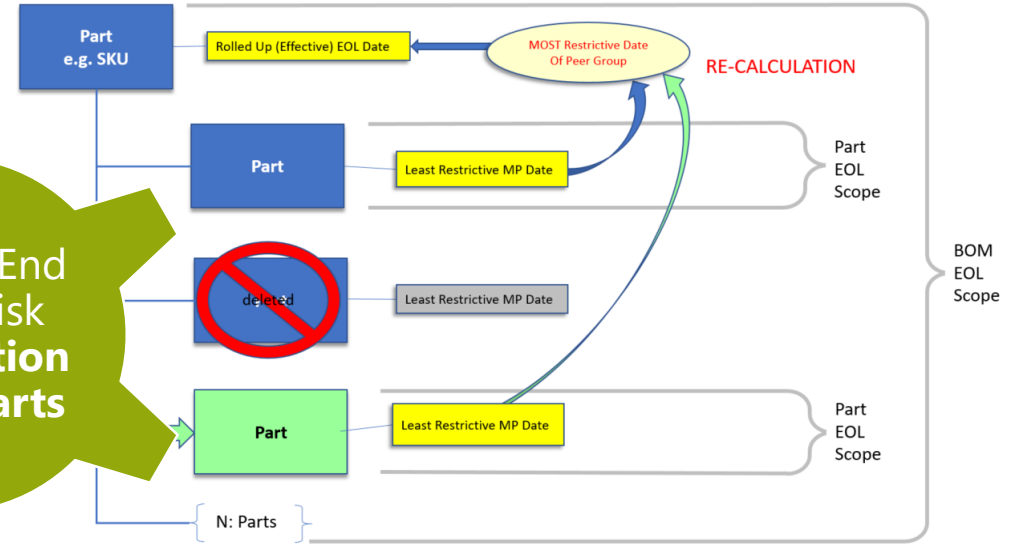
Roll Up engine

RollupQueue

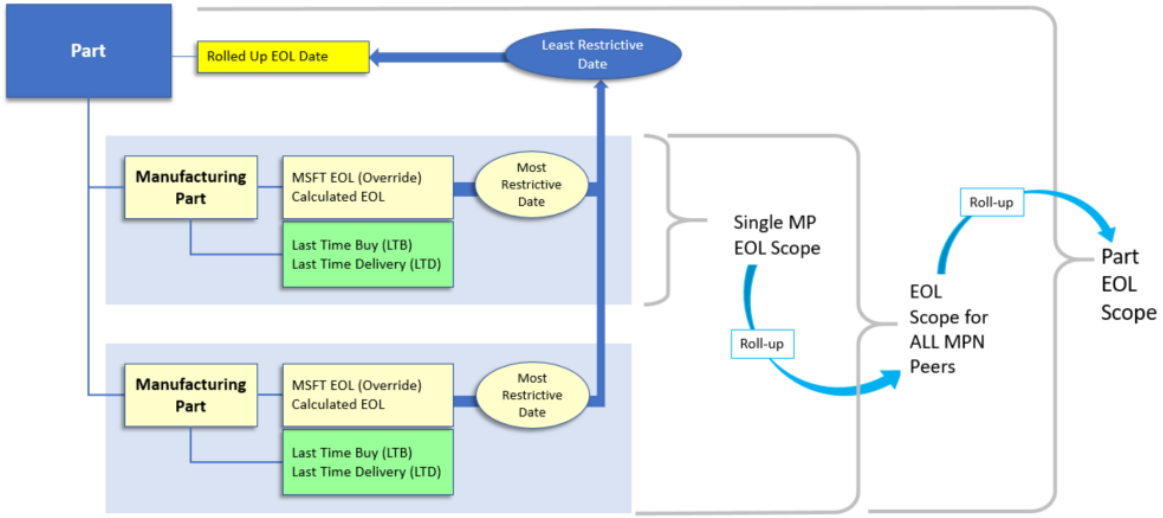


Automatic roll up in multilevel Bill of Materials -> on all Parts

Provide End of Life risk **information for all parts**



Capability to search and find all End Of Life Parts

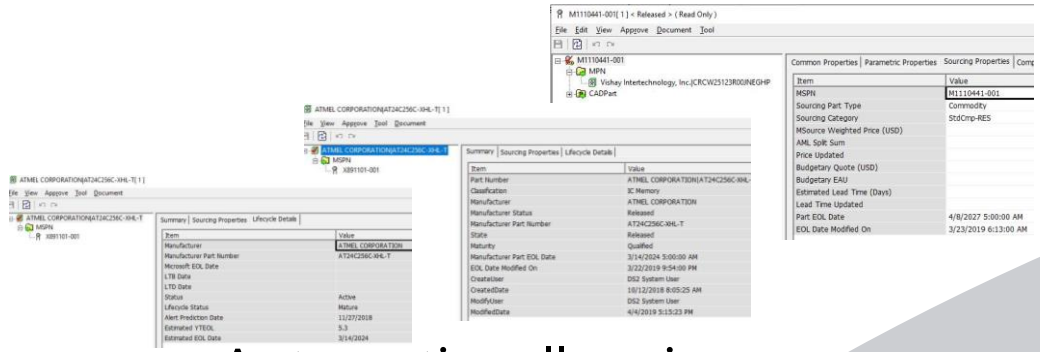


Automatic data collection thru Aras CE I.H.S. Cloud -> on Manufacturer Parts

What we customized (with Aras help):

- Rollup Queue engine
- Trigger events
- Calculation
- Extension Items

Automatic validations



Automatic roll up in multilevel Bill of Materials -> on all Parts

Automatic data collection thru Aras CE I.H.S. Cloud -> on Manufacturer Parts

Capability to search and find all End Of Life Parts

What we customized:

- Check for Completeness
- Warning Acknowledgement
- Data Lake integration
- PowerBI Report

End Of Life visibility in Designers' tools and on global PowerBI dashboards

Power BI

Check EOL risk **before selecting and releasing** parts.

Automatic validation against End Of Life before Parts Release

ECO release process Completeness Check

ACE 2019
INNOVATE
TRANSCEND
REALIZE

Additional Demo Session

CE – A Critical Component of Your Product Design

Wednesday 4:05 – 4:50 PM Gary Wilmot - Aras

ACE 2019
INNOVATE
TRANSCEND
REALIZE

Thank You

Craig Currie

ccurrie@aras.com