

# Digital Obsolescence Management



PCN/PDN Management  
Life Cycle Management &  
Obsolescence Risk Modeling  
Material Compliance Management

GET IT  
DONE!

# Imagine

**Get work done** in a fraction of time, just with a few clicks.

All the **data** you need is available and linked.

Processing of **PCN/PDN** in a designated tool instead of in your email inbox.

Be constantly **synchronized** with the data of your ERP and engineering systems.

Using tools **made for the job** instead of improvising with spreadsheets.

Experience **real digitization** as part of your professional work in obsolescence management.

**Collaborate** with your colleagues worldwide based on easy-to-use workflows and common data.

**Plan** the life cycle of your products and services based on all your components.

Provide **material compliance** data for your customers and the EU-SCIP database automatically.

Time is not just money. The time wasted with unproductive handling of data costs more than money. It is a waste of the brain power of skilled people. Let computers do the things they are good at.

# Get it now - get it done!

Our vision is to provide you with a set of outstanding tools that allow you to focus on what really matters.

We listen to the needs of the obsolescence management community and create solutions that will exceed your expectations.

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ERP Enterprise Resource Planning  
PCN Product Change Notification  
PDN Product Discontinuation Notification  
SCIP Substances of Concern In Products

# Digitization

**Digitization is the key to improving processes to be faster, to getting more done at lower costs.**

Obsolescence management (OM) is not covered by the typical ERP and engineering IT systems. As a result obsolescence managers have to work with a lot of different tools and applications, that do not really inter-work, leaving this task to humans using spreadsheets. OM brings together external information with impact on the company with internal information from the company.

### Transform information into data

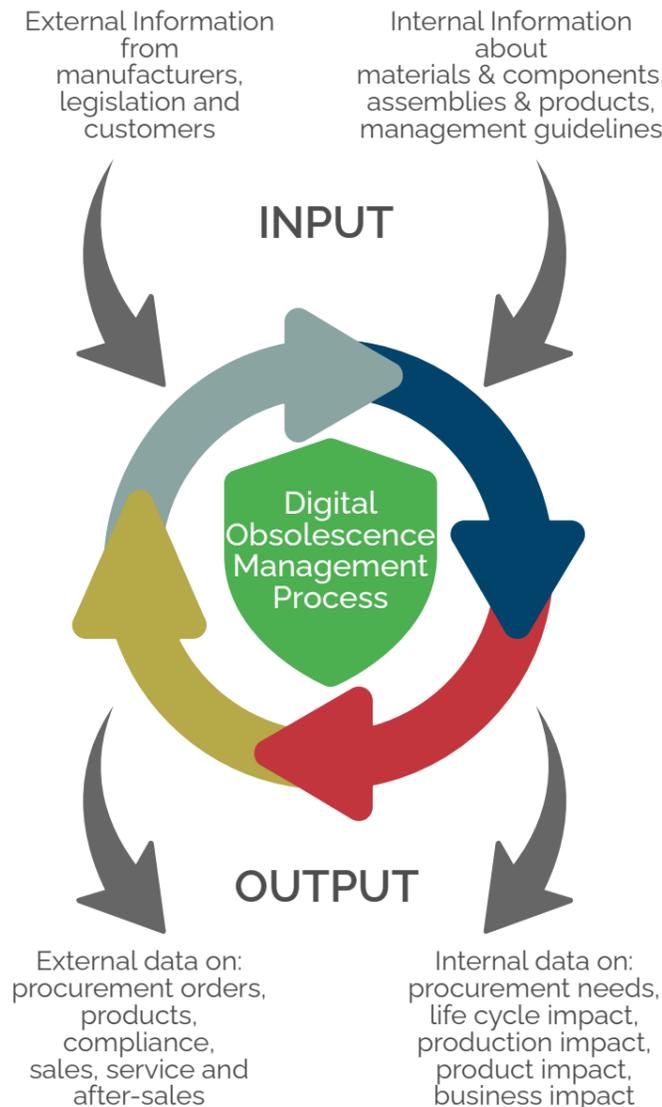
Today obsolescence managers are tied up with transformation of information into data instead of controlling the process.

Digital OM starts with digitized information like smartPCN and creates a consistent flow of data, allowing obsolescence managers to focus on the management of the process and its results.

### Work with the results

The results trigger information given to external stakeholders and information needed to implement measures to reduce the probability as well as the impact of obsolescence.

Digital OM uses digitized information, which is linked to various objects and aggregated, based on rules and algorithms. The results are well documented, fact driven and consistent.



ERP Enterprise Resource Planning  
 OM Obsolescence Management  
 PCN Product Change Notification  
 PDN Product Discontinuation Notification  
 SCIP Substances of Concern In Products

# Get it done

### Experience a new way of working

Imagine how much better you will be in processing your tasks in obsolescence management using excellent tools that bring you the benefits of real digitization.

Get it done means for us to provide innovative tools and algorithms that help you to:

- get rid of tedious jobs,
- get meaningful data for your decisions just with a few clicks,
- focus on the important parts of your job,
- finish your tasks fast and with less effort.

All your precious data stays where it belongs to: on your company servers. All our tools run within your IT network and are therefore fully confidential and under your complete control.

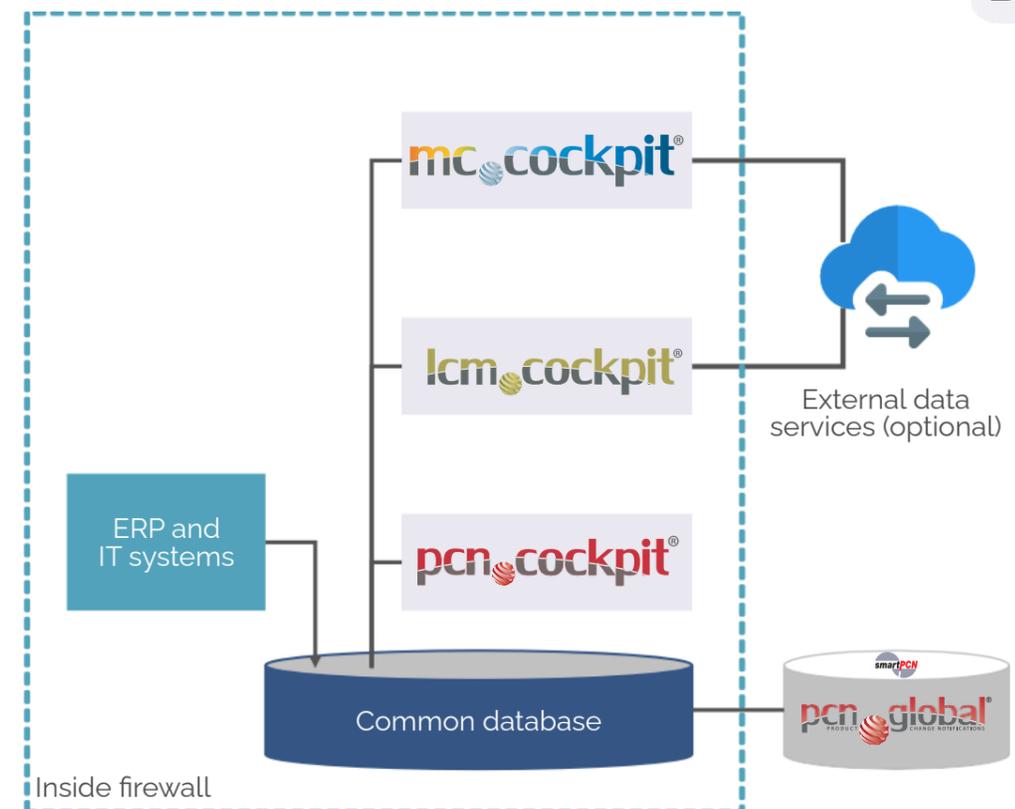
Get done all the tasks related to the processing of PCN/PDN supported by an outstanding tool, the pcn.cockpit.

Get done life cycle management and the proactive part of obsolescence management with modeling of future obsolescence risks using the lcm.cockpit.

Get done the new challenge of material compliance caused by the EU SCIP registration with the mc.cockpit.

Get it done with the common interface approach, where all our tools work on the same database. Interfaces and daily data synchronization with your other IT systems is as easy as possible.

**GET IT DONE!**



# PCN smart & digital

Each PCN/PDN you receive from suppliers looks very different. From just emails, tables, links and PDF documents to even scanned documents there is every format you can think of, sometimes with thousands of part numbers.

How much work is it for you to process those PCN/PDN in your company? How much effort is needed to read, classify, understand and finally copy the data into a format you can work with?

## Is there a digital solution?

Yes, it is called smartPCN. It is a standardized digital format, just like JPEG, PDF or HTML. It is created by PCN managers working together in the Component Obsolescence Group Germany (COGD), the German chapter of the IOM, the International Institute of Obsolescence Management.

The smartPCN format allows to digitize almost any PCN/PDN of any kind of tangible or non-tangible item of any industry sector.

A smartPCN data set is like a small database with data fields and attached documents.

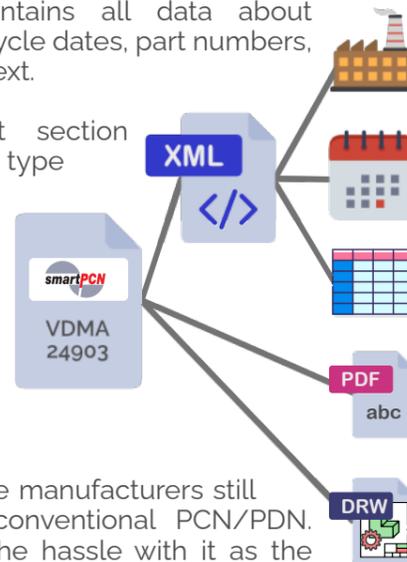
The XML part contains all data about manufacturers, life cycle dates, part numbers, categories and any text.

In the attachment section documents of any type are available.

smartPCN is already standardized with the German standard VDMA 24903 and is in progress for an IEC standard as part of IEC 62402.

However, most of the manufacturers still prefer to provide conventional PCN/PDN. They do not have the hassle with it as the recipients do.

This is the reason why we have created the pcn.global database and the Digital PCN Loop.



# The Digital PCN Loop

**Imagine** receiving all PCN/PDN sent to your company in the digital smartPCN format. It would save you a tremendous amount of effort, is much faster and avoids processing the PCN/PDN in your email inbox.

## Forward all your PCN/PDN

We make this vision come true! Just forward all PCN/PDN that you receive to pcn.global, our smartPCN database. We convert every PCN/PDN into a smartPCN data set, regardless whether you need it later or not. And the conversion is for free!

## Receive digital smartPCN

All the PCN/PDN you send to us are coming back to you via the smart inbox of the pcn.cockpit as smartPCN data sets. That is what we call the **Digital PCN Loop**.

## Benefit from other smartPCN users

Additionally, you benefit from all the smartPCN we create from PCN/PDN directly provided by manufacturers and distributors. You also benefit from all the PCN/PDN we receive from all our customers, among them world leading companies with millions of components of all kinds. This is a unique, smartPCN based service that, to our knowledge, nobody else offers.

## No more reading of PCN/PDN emails

Forget reading and processing heaps of traditional classic, non-digital PCN/PDN from your email inbox.



PCN Number	Title	Type	Manufacturer	Issued
SamplePCN-02	Product Change Notification - Change of location of the assembly plant	PCN-MAJOR	D+D+M Daten- und Dokumentations-Management GmbH & Co. KG	2021-08-01

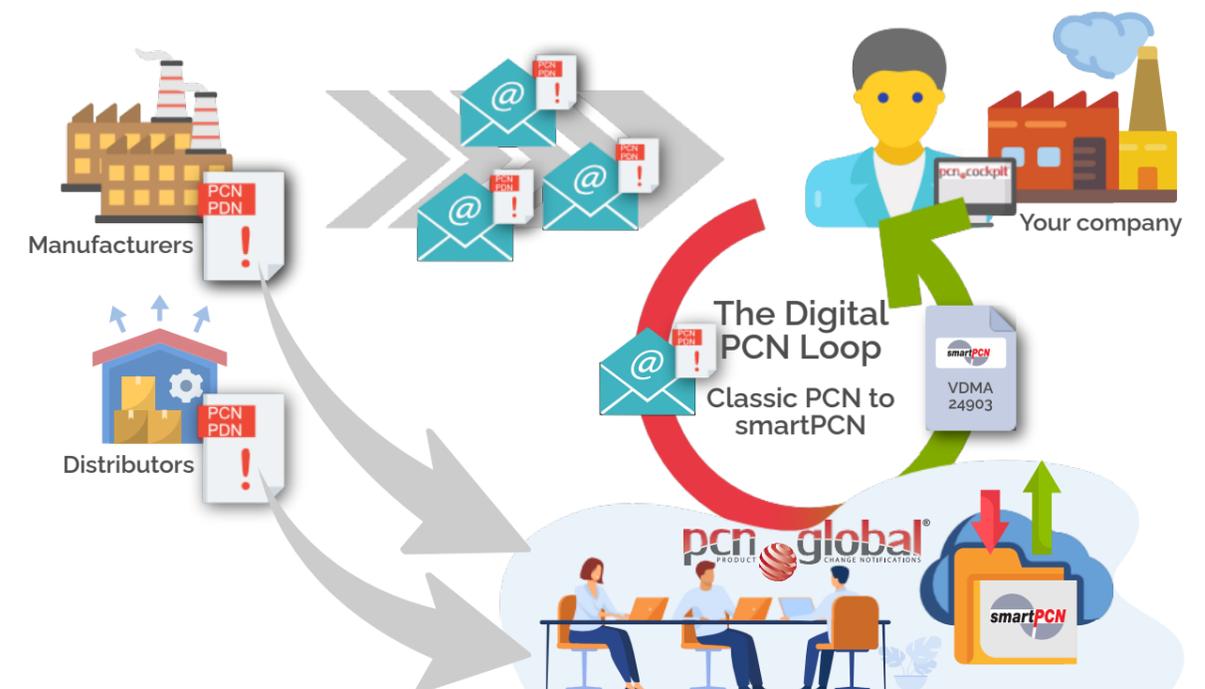
  

PCN Description	Change Category	Life Cycle Data Min - Max	Substructures available
Reason for Revision: Changed date for start of delivery. As our current assembly plant in China is overloaded with the large number of products produced, we will final assemble some of our products in Thailand in the future. In addition, some products change the mold compound used. For some products, the bondwire changes from copper to gold. For all IC's, the packaging quantity is changed from 1000 pieces per carton to 1500 pieces.	lock Assy matflood matfloodWire shipPkgDim PRODS	SOP: 2021-12-01 EOS: 2021-12-01 EOP: 2021-12-01 EFP: 2021-12-01 LTD: 2021-12-01 EOSR: 2021-12-01 LIC: 2021-12-01	REACH 1

Relevant Items	Type Ident	Item Name	Description	Item Categories	Attachments
AKY1-AB1	112233445561	AKY1 series	MOSFET DUAL N-CH 30V	ACEL 04 ELME 15 PAEL 30	PCN.pdf parts.pdf
AKY1-AB10	112233445570	AKY1 series	MOSFET DUAL N-CH 80V		
AKY1-AB10-TR	112233445582	AKY1 series	MOSFET DUAL N-CH 80V		
AKY1-AB11	112233445571	AKY1 series	MOSFET DUAL N-CH 90V		
AKY1-AB11-TR	112233445583	AKY1 series	MOSFET DUAL N-CH 90V		
AKY1-AB12	112233445572	AKY1 series	MOSFET DUAL N-CH 100V		
AKY1-AB12-TR	112233445584	AKY1 series	MOSFET DUAL N-CH 100V		
AKY1-AB1-TR	112233445573	AKY1 series	MOSFET DUAL N-CH 30V		

The pcn.inspector is the perfect tool to view a smartPCN file and is integrated in all of our tools. It is also available for free usage at: <https://om.cockpit.global/inspector/>



# pcn.cockpit - digital PCN/PDN management

The **pcn.cockpit** is a digital PCN/PDN management system that covers the complete process of PCN/PDN processing from PCN inbox to the generation of PCN for your customers.

The matching result is your PCN inbox where you decide whether you want to process the PCN or ignore it.

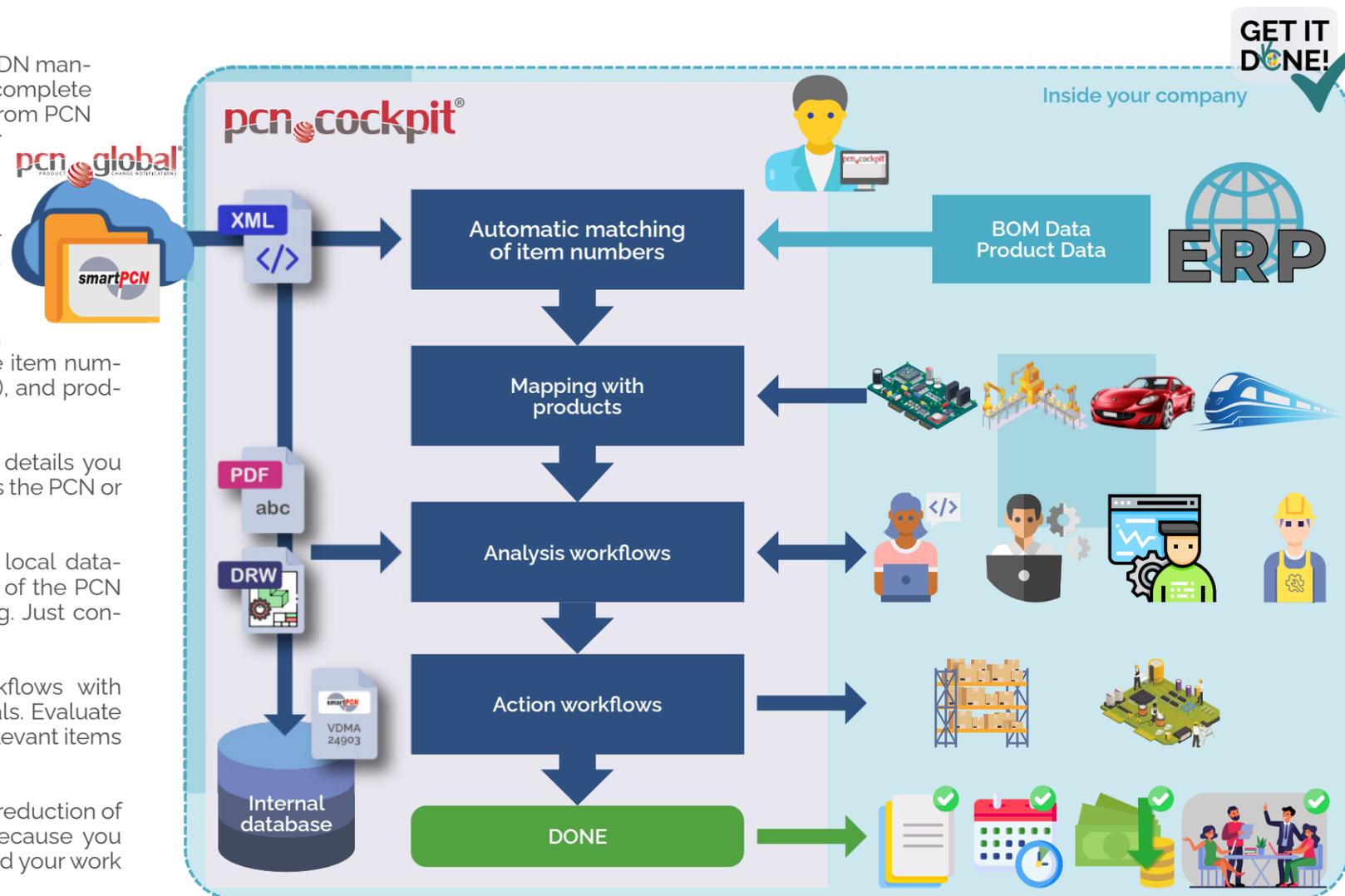
Those smartPCN and their item numbers, that match best with the item numbers of your bill of materials (BOM), and products are displayed.

With a few clicks you see all the details you need to decide, whether to process the PCN or to ignore it.

After being downloaded into the local database, all data and all attachments of the PCN are available for further processing. Just confirm the matches with a few clicks.

Create analysis and action workflows with tasks for organizations or individuals. Evaluate the results and continue until all relevant items and assemblies are processed.

Everybody benefits from a drastic reduction of workload. You will be pleased, because you will keep schedules, save costs, and your work is really satisfying. Get it done.



## Your 10 main benefits

- The whole process is under your control.
- All your BOM and product data is in perfect sync between the pcn.cockpit and your ERP and engineering systems.
- 100% digital from beginning to end, safe and secure, without media breaks, format changes, copy/paste or typing errors.
- All you need for PCN processing is available in one system.
- No more reading of PCN emails.
- Receive all your PCN converted into smartPCN, for all types and items.
- Receive a specific PCN only once instead of multiple times.
- Workflows and tasks are automatically distributed and the results are immediately available.
- Efforts are significantly reduced for all parties involved.
- The PCN process is fully managed, in line with IEC62402, and audit proof.

## Matching

Every day your pcn.cockpit receives the key data of all smartPCN from the pcn.global database and matches them with your BOM and product data. Our algorithms are based on similarity and show you the differences. PCN sent to us, that do not match, are displayed in an extra section. Control the matching with our smart tools.

## Mapping

Confirm matches (even inexact ones) and the pcn.cockpit links the item numbers of the PCN to your BOM and product data. See all assemblies and products of all indenture levels affected by the PCN. Mapping data is stored and applied automatically to subsequent PCN.

## Analysis workflows

Get your experts in your company involved - wherever they are. Select the items and the affected assemblies of a PCN and process analysis workflows in just five steps. Use the various categories for precise results. Add documents and descriptions for details. Everything is stored in the database consistently and reliably.

## Action workflows

The analysis results lead to actions like bridge-buy, redesign or alternative procurement. Initiate an action workflow just in five steps and receive the action results in the same way as for analysis workflows. When all items, assemblies and workflows are processed, the PCN status becomes 'Done' and your work is finished. You got it done.

# The smart inbox for PCN

## Matching matters

The PCN inbox with the matching results is the essential part of the pcn.cockpit as everything starts from here.

The matching process compares all items within a smartPCN data set with the data provided by your ERP and engineering systems, the part numbers and manufacturer's names you use.

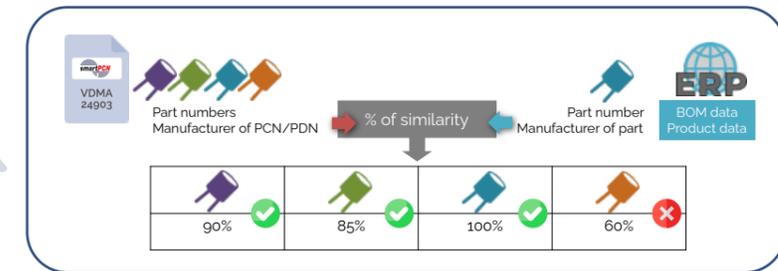
Instead of yes/no results we have developed an algorithm that calculates the similarity between item numbers as well as manufacturer names. We combine the results and anything above 80% is a match.

We also accept wildcards like '\*' and '?' for item numbers both in PCN and BOM.

Some manufacturers use parallel identification schemes, like order numbers and part numbers. Therefore we search for matches in several data fields of the PCN.

Use our matching tools to define rules and influence the matching parameters. You define how manufacturer names are substituted - very useful when manufacturers change their names.

We have taken care of everything to get a reliable and fault-tolerant matching with optional optimizations.

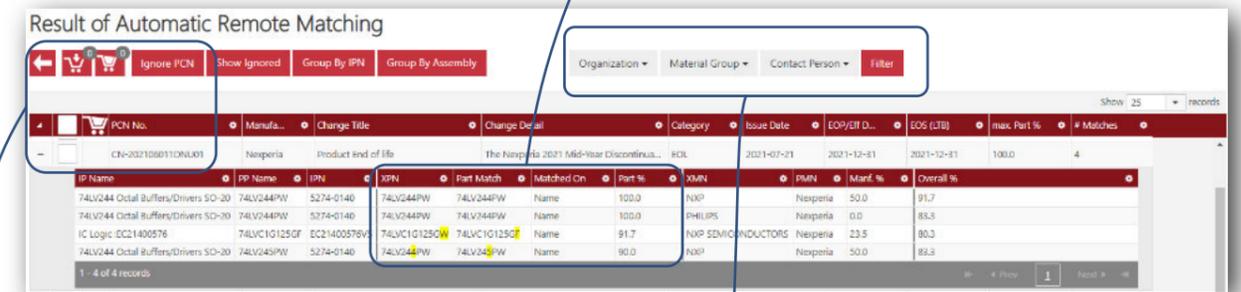


## Ignoring PCN

The matching result lists all the PCN and only those that fit the matching criteria. Not all PCN are relevant for you. You decide which ones you need to download and process.

## What about the others?

Ignore PCN that are not relevant for you. They are not deleted but stored in the background. You can retrieve them at any time. Also new matches bring them back.

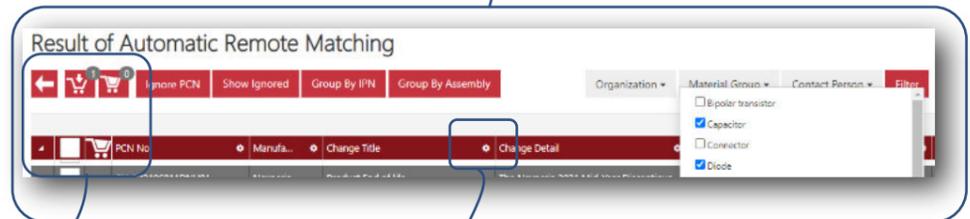


## Select your view

There are three basic views: Matching results by PCN, by your internal part number (IPN) and even by assemblies, your lowest level bill of materials. All views show the ignored PCN if necessary.

In addition there are three filters related to administrative data of your parts: material group, organization and responsible person (you may use other data for those filters). See just the PCN of a specific material group.

In each view sort and filter the tables by each column, or even combined columns.



## Select your PCN

Expand a PCN entry with one click on the + sign to see all the matching results. Decide based on the matching results whether to download or ignore the PCN.

## Mark up a PCN

Select one or several PCN to mark them up for download or to ignore it. Transfer all PCN marked up to the download area where you initiate the download from pcn.global to your pcn.cockpit.



# PCN analysis cockpit

## The center for all activities

The main analysis screen is the central cockpit for all PCN related activities:

- See all active PCN/PDN and their status.
- Initiate and view all the process details from here. The colors of the buttons indicate the high-level status of each process step.
- The status column provides details about the progress and open steps.
- The assembly column lists all directly affected assemblies.

The smartPCN button on the left opens the pcn.inspector with the smartPCN details.

There are different views for sorting and grouping PCN by PCN type, assembly, part number and manufacturer. The list can be filtered by other properties like organization, material group or contact person. All columns provide sort and filter functions.

As soon as a PCN is in status 'Done' it disappears from the active list. Completed PCN are displayed with just one click.

You have a complete overview of the current status. See all the details with just one click.

pcn.analysis - All

Organization Material Group Contact Person Filter

Show 25 records

PCN No	PCN Title	Manufacturer	Issue Date	Status	Affected Assemblies	Import Date	Category
NRFND.PG0006.1...	Not Recommended for New Design: LA S...	Panasonic	2018-12-26	DONE	Test Module 8	2020-06-19	Major
HEMCG2-2681b	Product Withdrawal Notice - Chip Monoli...	muRata	2018-03-20	WIP: Mapping needed ...	Test Module 2, Test Modu...	2020-06-17	EOL
PSCAAA	DESIGN/PROCESS CHANGE NOTIFICATION	Fairchild	2016-08-17	unprocessed		2020-06-03	Major

Follow up    Categorization    Mapping    Analysis workflows    Action workflows    Done

Set    Available    Done    Done    Done    Done

Expired    None    Incomplete    Incomplete    Incomplete    Work in progress

None    None    None    None    None    None

# Categorize ▶ Map ▶ Link

## Categorization and follow up

Categorization allows you to enter general comments about the PCN and categorize risk and priority. It is like a message board.

Follow-up is used to send out notifications and to track up information without requesting answers.

## Mapping to confirm matches

Since individual matches can be below 100%, matches need to be confirmed.

Smart functions as well as sorting and filtering support this task which is done with a few clicks. At any time mappings can be edited. All mappings are stored and automatically applied to subsequent PCN with the same items.

## Link to assemblies and products

After mapping the pcn.cockpit links all assemblies and products to the PCN and the related items. This applies to all indenture levels provided by the ERP system.

## Categorization

## Mapping

ERP BOM data + VDMA 24903 = % of similarity

IPN	XMN	XPN	Match	Item Number	Matched On	Similarity %	Status
A014506	ROHM	SLR-37MG3FM	SLR-37MG3FM	SLR-37MG3FM	Number	100.0	Mapped
A014506	ROHM	SLR-37MG3F	SLR-37MG3F	SLR-37MG3F	Number	90.9	Excluded
A014506	ROHM	SLR-37MG3F	SLR-37MG3F	SLR-37MG3F	Number	90.9	Excluded

## Linking

VDMA 24903 + ERP BOM data Product data = Linking

PCN: 20201300 Title: Nexperia 2020 Year-End DN Cycle

- IPN: FETEC21403476, IPName: FETEC21403476, PPN: BSH114.215, XPN: BSH114, XMN: NXP SEMICONDUCTORS, IPDescription: FETFE
- Assembly: PCB\_C07, Name: PCB\_C07 Display driver, Description: Display driver for large displays
- Assembly: Productionline\_C, Name: Basic System Medical, Description: Main control system Medical market
- Assembly: Vanguard\_UK, Name: Main unit generic UK, Description: Home system
- Assembly: Package\_EU\_UK, Name: Complete Europe, Description: Package EU and UK
- Assembly: Catfish, Name: Main unit generic Catfish, Description: Medical system
- Assembly: Sparrow\_China, Name: Main unit generic: China, Description: Industrial system

# Let it flow: Analysis and action workflows

## Involve your experts

For the analysis of the impact on assemblies and products, many experts usually need to be involved: from R&D, procurement, production, logistics and even sales, and dedicated individuals.

Instead of meetings or emails, just define an analysis workflow. A workflow is related to one or several assemblies with one or several parts. Each workflow consists of tasks addressed to a group or individual users.

The recipients of the task answer via a form that allows to view the smartPCN, the assemblies and items of the workflow and workflow details. The reply consists of categories for risk, priority, criticality, conclusions and task status as well as comments and attached documents.

The PCN administrator or obsolescence manager sees all results immediately to evaluate the overall impact.

All results are stored and available at any time.

It just takes five easy steps for the whole process:

1. Select the assemblies and specific items that are part of this workflow.
2. Select the workflow template and distribution list for tasks.

3. Fill the template with task descriptions, add groups or individuals, and add optional documents.
4. Workflow recipients reply to tasks with a standardized form.
5. Evaluate the workflow and the task results.

The task owners respond via a standardized form. All data is stored immediately in the database without any need to retrieve and copy data out of emails.

The form allows access to the smartPCN, the tailored list of parts, assemblies, and products related to the workflow.

There are categorized and customized answers for risk, priority, criticality, conclusions, and the task status.

Comments are entered as free text. Also documents can be attached.

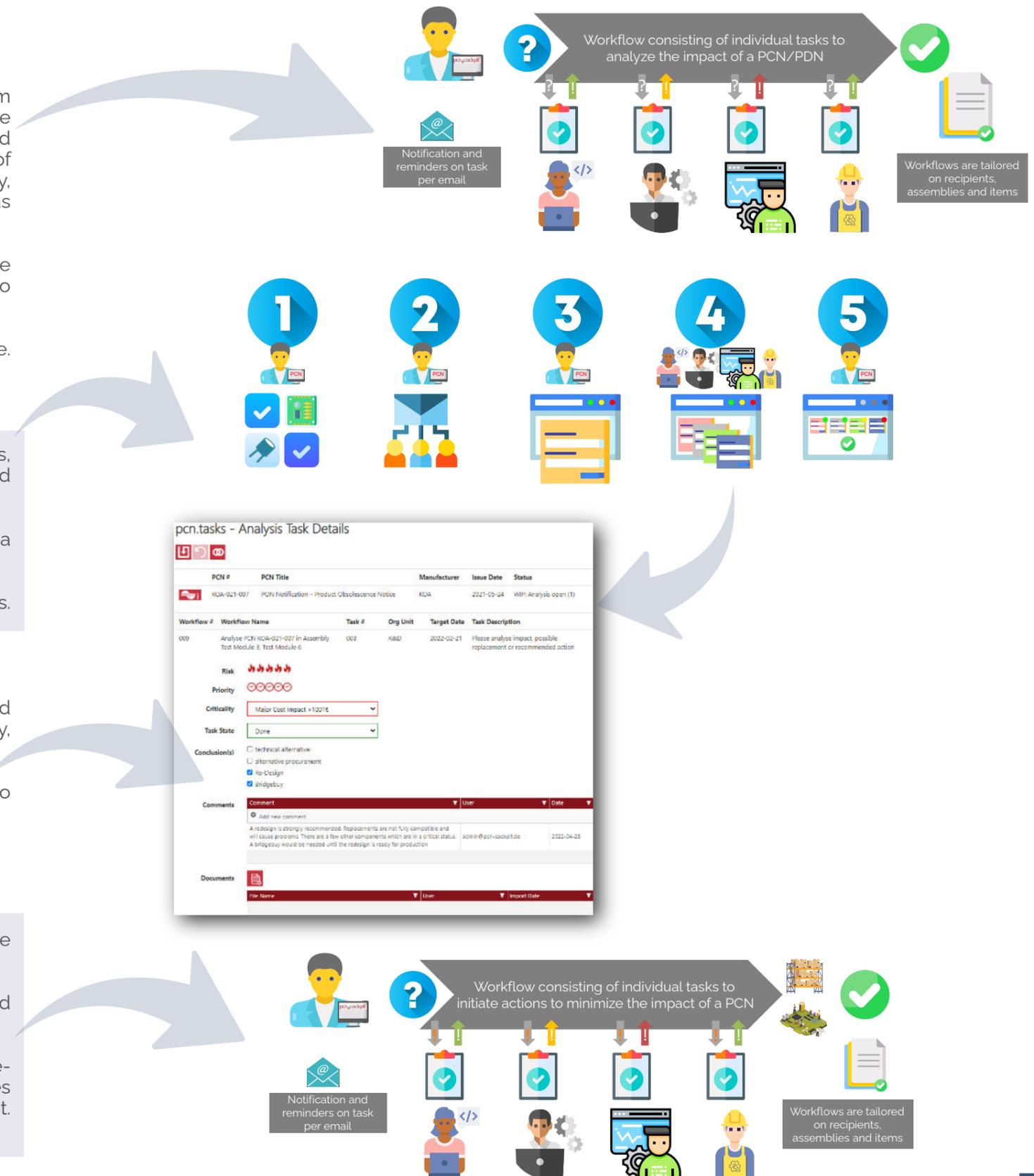
Based on the results of analysis workflows, action workflows are created for a task, or a workflow in the same way as the analysis workflows.

There are several options for tailoring action workflows and how to include analysis results. The task form displays the related analysis workflow and tasks and allows direct access to the analysis results.

The recipients answer with the results of the actions in a similar way.

Everything is stored in the database and available in real-time.

The whole workflow process is fast, convenient, with minimum effort for all parties involved. This is digitization at its best. Get it done.



# Smart functions for smart work

## What makes a tool a good tool?

Beside the smart features, the support functions help you to get work done in less time with less effort.



The smart support functions are a significant contributor to the drastic reduction of PCN management effort reported by our customers. This is the benefit of the smartPCN format and our consequent digitization approach.

Each step has integrated smart functions, from matching and mapping to action workflows.

Customize the way your pcn.cockpit works by adjusting parameters, grouping results, sorting and filtering of tables, and much more.

In addition there are extra functions:

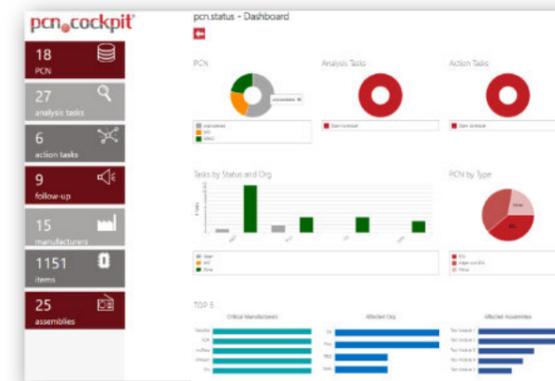
- Task administration for direct access to all workflows and tasks.
- The pcn.store with all downloaded smartPCN allows the import of other smartPCN and editing of smartPCN content.
- The integrated pcn.creator to create smartPCN for changes of your assemblies.
- Administration of BOM and product data stored in pcn.cockpit and a manual BOM import.
- The pcn.status provides the dashboard and various reports.
- A full-text search machine to find any term within the pcn.cockpit database.

## Dashboard and reports

The built-in dashboard provides key performance indicators and statistics in real time.

On the left side is the overview on statistics from the database.

On the right side charts provide an overview on: the number of PCN, their overall status, the number and status of



tasks, the tasks per organization, PCN types and top five statics of EOL PCN, tasks per organization, and affected assemblies.

Various reports provide tables with detailed information and allow direct access to the content. There is also a spreadsheet export function.

pcn.status - Analysis Task Report

#	Workflow	Workflow ...	Creator	# Task	Description	Resp. Org	Resp. User	Target Date	Status	Assemblies	PCN
001	Analyse PCN PCN...		admin@pcn-cock...	001	Check consistenc...	R&D		2/22/2019	Open	MB_A2235*103	PCN-2018-RGU04
002	Analyse PCN PTN...		admin@pcn-cock...	001	Analyse impact	R&D		2/22/2019	Done	Comm Series B-2...	PTN-NLR-002-20...
003	Analyse PCN PTN...		admin@pcn-cock...	001	Clarify impact for...	R&D		2/22/2019	Done	PCB_B10 Sensor...	PTN-NLR-002-20...
004	Analyse PCN PTN...		admin@pcn-cock...	001	Test	R&D		2/23/2019	Done	MB_A2235*101	PTN-NLR-002-20...
004	Analyse PCN PTN...		admin@pcn-cock...	Add 1	Investigate piggy...	R&D		2/23/2019	Done	MB_A2235*101	PTN-NLR-002-20...
004	Analyse PCN PTN...		admin@pcn-cock...	Add2	Investigate altern...	R&D		2/23/2019	Done	MB_A2235*101	PTN-NLR-002-20...
005	Analyse PCN KSR...		admin@pcn-cock...	004	test	Sales		3/24/2019	Done	Comm Series B-2...	KSBA-BRUIVUSF...
006	Analyse PCN 230...		admin@pcn-cock...	004	Test	Sales		3/24/2019	Done	PCB_A03 Controll...	2305

pcn.search - full text search

Searching tips

alternative

pcn.global (1434) pcn.store (7) bom.admin (0) pcn.tasks (14)

global.pcn (1434) global.items (0)

PCN No	PCN Title	Manufacturer	Found in	Sample text
Quectel_PCN_2019090501	Product Change Notification	Quectel	ChangeTitle, ChangeDetail	Alternative materials. Anti-collision component protective ac
201607034F01	Assembly and final test transfer to ASEN f...	NXP	ChangeTitle, ChangeDetail	Release alternative source, reliable product deliveries also th
1706004	Add alternative wafer source for RIA3415...	Panjit	ChangeTitle, Title, ChangeDetail	Alternative wafer source, Add alternative wafer source for R
ESU270-57	Alternative Wafer Foundry Approval for S...	Littelfuse	ChangeTitle, Title, ChangeDetail	Alternative wafer foundry, Alternative Wafer Foundry Appro
LFPCN_PC0128	600 V Distribution Block Alternative Mate...	Littelfuse	ChangeTitle, Title, ChangeDetail	Alternative material color, 600 V Distribution Block Alternati
P-21-021318	Product Change Notification - Super seal ...	TE (Tyco)	ChangeTitle, ChangeDetail	Alternative material usage, Dear Customer, Due to the curre
PCN-20-0009	Alternative Battery Model	PULS	ChangeTitle, Title	Alternative battery model approved by PULS, Alternati

The search function is a powerful tool for finding any term or expression within the pcn.cockpit database. This also includes the data from the pcn.global database used for matching.

The tabs like pcn.global or pcn.task indicate the number of found results in this section.

The result table provides sorting and filtering functions.

This is only a fraction of the features provided by pcn.cockpit. There is much more functionality and customizing built-in or available on request.

With the pcn.cockpit you immediately achieve digitization for PCN/PDN management. Integration into your IT landscape and setup is easy to do. It just needs standard servers, an SQL database and an internet connection. This is good for a quick start into digitization.

Apply step by step different levels of customizing, add users, use more features and enhance the integration with your other systems.

Do you need a special feature, specific interfaces or functional extensions? Contact us, we have a solution.

The pcn.cockpit uses encrypted interfaces and has been evaluated by companies with the highest security requirements - and met them.

Many small, medium and global enterprises use the pcn.cockpit - so can you!



# The index of life

**Life cycle management** is a challenging task. The planned life cycle of products and services is threatened everyday by obsolescence events of materials, components, assemblies, procured products, software or even lack of know-how.

We are talking about the life cycle of a generic product model but not the individual life cycle of a specific product, e.g. caused by degeneration.

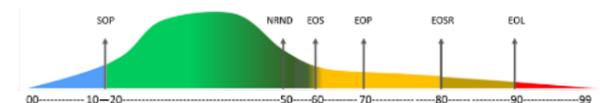
The questions related to life cycle management are:

- How long do we want to produce the product or offer the service?

**Events** like end of production or end of sales are fixed points. You can take them into account only when you know them.

The life cycle index (LCI) is a number between 0 and 99 and describes the perceived age. Applied to humans, there is usually a linear relation between the age in calendar years and the perceived age. However we know that the line is more or less steep for different individuals.

Over time the LCI increases. A low LCI value means a young object, a high LCI value a high probability of an end-of-life scenario.



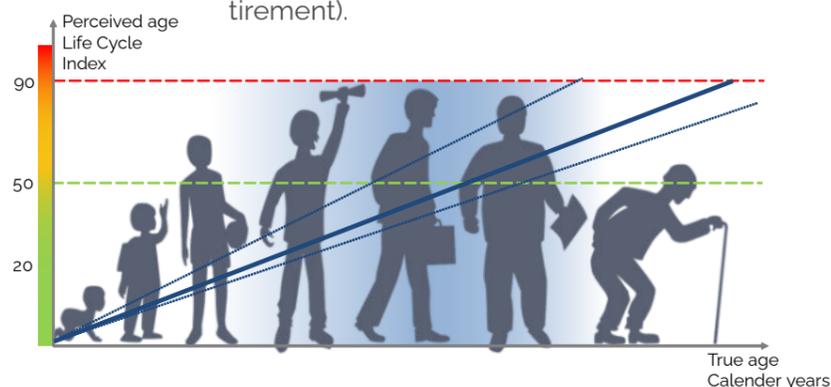
- SOP Start Of Production
- NRND Not Recommended for New Design
- EOS End Of Sales
- EOP End Of Production
- EOSR End Of Service & Repair
- EOL End Of Life

- How long can we produce the product and offer the service?
- How do procured items (base-items) like materials, components, software or services impact my production, products and services?

The life cycle data and a concept called life cycle index allow the estimation of future obsolescence risks and the realization of obsolescence management plans.

It is a new and innovate concept that integrates planning, assumptions and facts in one comprehensive approach.

Based on this you are able to define life cycle phases (e.g. like school, first job, mid age, retirement).



Even if you do not know the exact points in time for the different phases, you know that people usually retire between 60 and 70. A person with an LCI of 60 has a higher risk of retiring than one with an LCI of 20. This is a reasonable approach for planning: If a certain age is reached, for example 55, the search for a successor should be initiated.

Risk calculations of insurance companies apply such principles. Specific lifestyles change the way how the LCI increases over time.

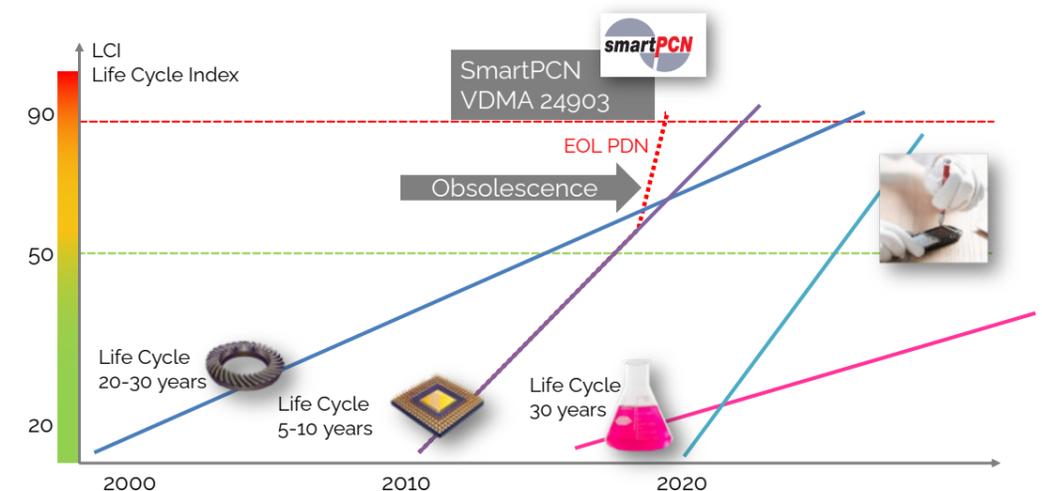
# Life cycle index at work

Applying this concept to procured items allows modeling the life cycle depending on the information available.

Modify the parameters when you get new information, change your assumptions or receive facts like a discontinuation notification PDN.

Calculate the LCI value at any point in the future based on the parameters for an individual part or a group of parts.

As we never know what the future brings, this is the forecast available now, and it is way better than vague guesswork.

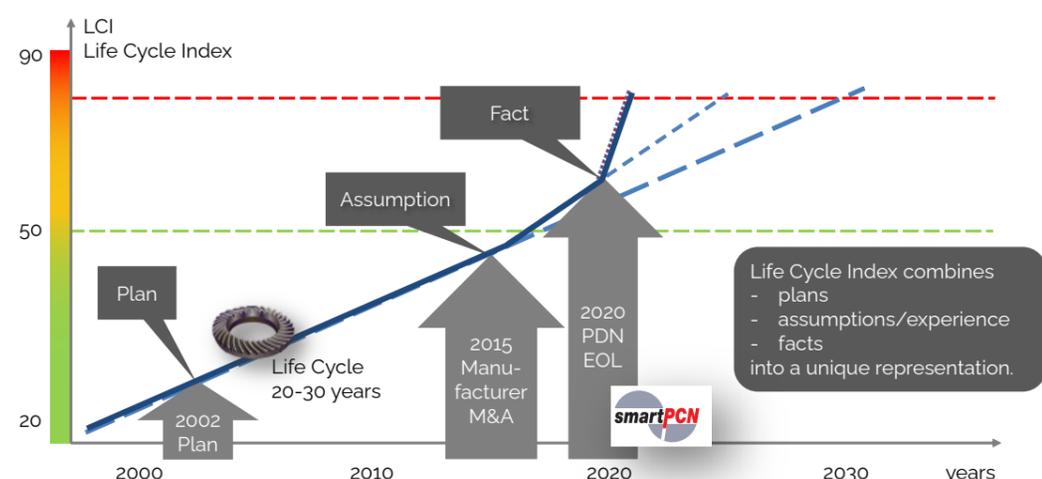


Below is the LCI curve for a gear part. The life cycle was planned in 2002.

In 2015 you get noticed that the manufacturer was acquired by a competitor. You expect an

EOL notice within the next years and change the parameters.

In 2020 your receive a PDN which changes your LCI curve finally.



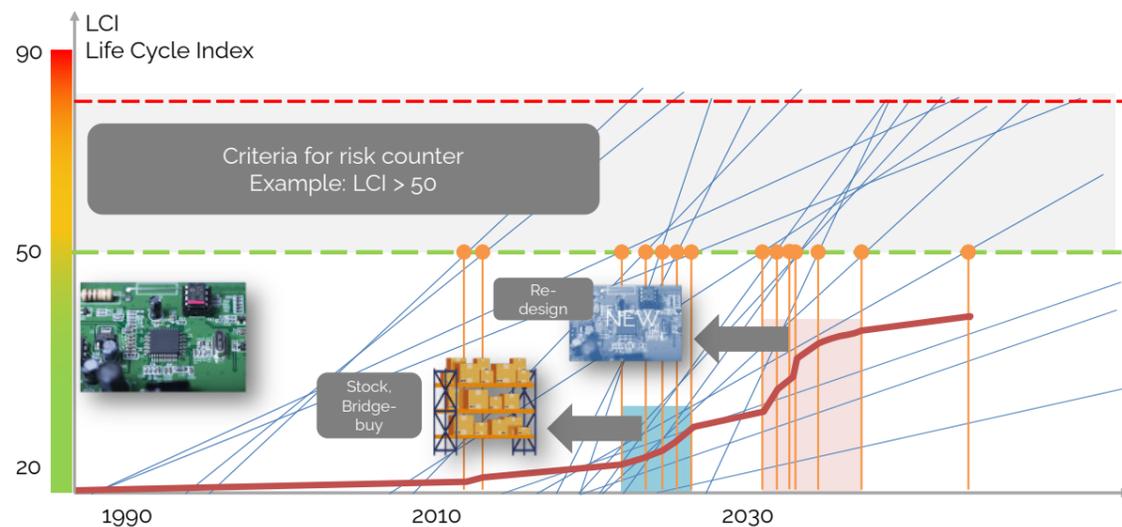
# Obsolescence ahead

Imagine to estimating - or even better - modeling the future obsolescence risk based on the life cycle index of your procured items. Automatically, for all your products and services. How does it work?

## Modeling of future obsolescence risks

For every item the obsolescence risk elevates with increasing LCI. Define an LCI value as a criteria, where you think the risk of obsolescence increases significantly (e.g. LCI 50). As soon as the LCI of an item exceeds the criteria, mark it as a candidate for obsolescence.

The more items of a product are above the criteria, the higher is your overall obsolescence risk for your product. Please take into account that risk probability does not mean certainty. It is a forecast of the future obsolescence risk based on the information of today.



The example above shows the LCI values of all components of a printed circuit board. Each time an LCI line crosses the criteria of LCI 50, the risk counter is increased by one. The red curve represents the course of the risk counter over time. The first step rise (light blue area) may trigger a proactive procurement of the parts with highest LCI. To avoid the second step rise (light red area), a re-design can be started in advance. Repeat the calculations for the new board. Such a diagram is very useful for stakeholders to justify expenditures.

Although this method is based on an easy-to-understand algorithm, it considers all your procured items.

Based on the different areas you may decide on the measures to apply, for instance like bridge-buy or small respectively large redesigns.

## Risk counters for your products

The absolute number of items above the criteria is the risk counter, that increases over time.

Set the risk counter in relation to the total number of parts of a product, and you get the relative risk counter with a value between 0 and 1 or as percentage value.

# It is good to have a plan

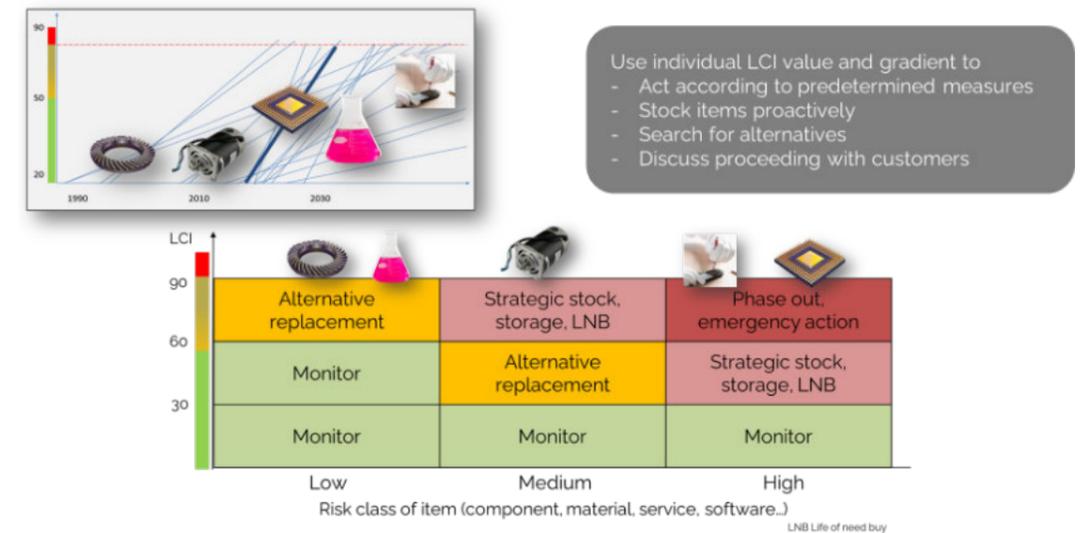
## Item obsolescence management plan

Obsolescence management plans define what to do depending on a certain situation.

Define the default actions for an item based on the risk level of this items and its life cycle index.

## Act proactively according to a plan

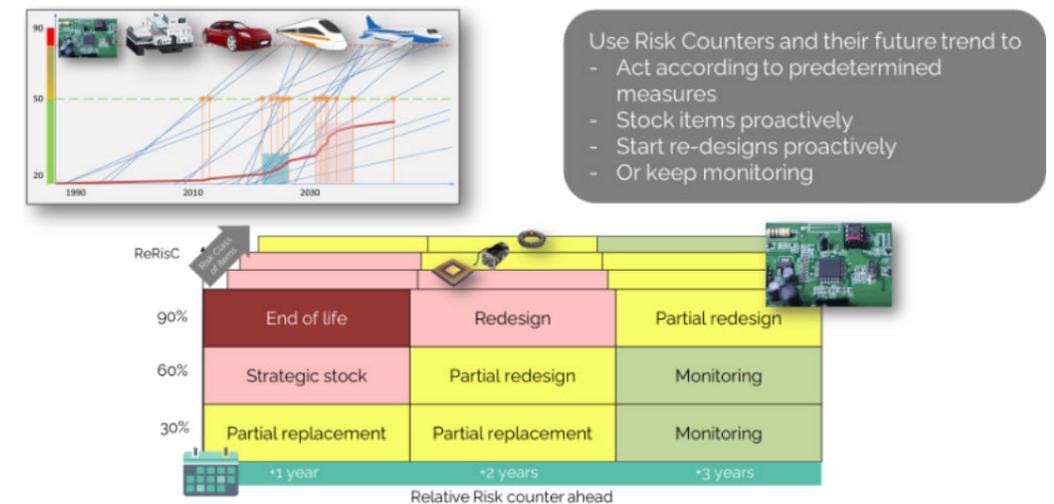
This is a reasonable approach for proactive actions. Some companies apply this principle by avoiding components that are too long on the market. Do not wait for the end of life messages of your supplier!



## Product obsolescence management plan

Apply the same principle to your products using the relative risk counter and its future

value to define the default actions. It prevents you from many surprises and justifies the actions taken. This is a proper obsolescence management according to IEC 62402.



# Life Cycle Management - Get it done!

## Life cycle health

Usually, you have thousands of parts and hundreds of products to supervise for obsolescence and life cycle status.

- How do you do this with reasonable effort?
- What is the effort being proactive instead of reactive?

Just imagine having a tool at hand that uses the principles of digitization to

- bring all data of your ERP and engineering systems together,
- connect to commercial database providers, and
- automatically calculate the life cycle index and life cycle status of all items and products.

The **lcm.cockpit** is the ultimate tool to manage and control the life cycle of all your items, assemblies and products.

It works with the same database as the **pcn.cockpit**. In case you use external databases, the **lcm.cockpit** connects to them via API and collects all information related to your items. Your BOM and product data are not disclosed.

In addition control and edit all data manually, or use the customized data import.

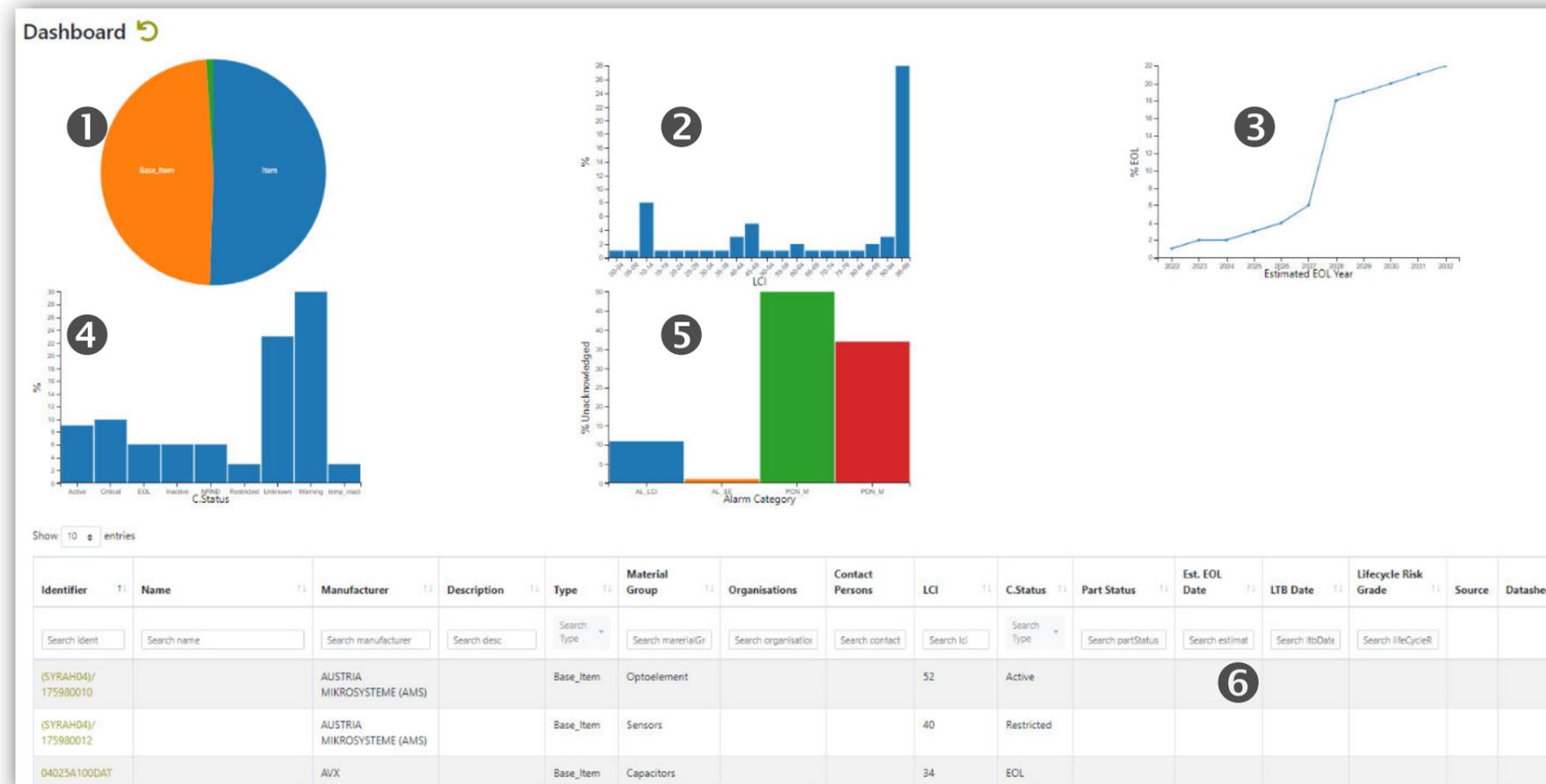
The LCI values of items, components, assemblies and products are automatically merged together for a calculation of life cycle status and risk, the life cycle index (LCI) and future obsolescence management. In addition alarms are defined based on various criteria.

The heart of the tool is the dashboard with fully interactive charts impacting in real-time the table of all objects selected in the charts and vice versa:

- Any selection in the charts acts as a filter for the table.
- Any filter/search applied to the table is immediately reflected in the charts.

Example 1: select the bar LCI 40-49 in the LCI distribution in chart (2) and see immediately the objects with an LCI between 40 and 49.

Example 2: Enter the year 2023 in the column LTB date in the table (6). The table lists all items with a last time buy in 2023. In addition all charts show the data just for those items.



1 Select between base-items, items and assemblies and see the related objects in the interactive table.

2 Aggregated number of items within an LCI cluster. Select an element to see and access the objects.

3 Cumulated number of base-items with EOL forecast over time. Click in the chart to see and access the related objects.

4 Distribution of objects based on the calculated life cycle status. Click on the bar to see and access the related objects.

5 Distribution of open alarms for objects in different alarm categories. Click on the bar to see and access the related alarms.

6 Interactive table which is linked bidirectional to the charts.

All data is linked together. Click on a link to explore the linked relations. Make use of the innovative concepts how objects, their properties and relations are linked together. Smart assistants provide interactive access to groups of objects based on properties.

# Impact of estimated EOL

Data service providers use algorithms to estimate the future end-of-life date. Via API the lcm.cockpit is able to collect the data from data providers - even multiple providers - for all or selected base-items.

The lcm.cockpit determines for each assembly and product, for all indenture levels, the number of base-items with the end-of-life date forecast in a specific year. Click on the ident number on the left side to see all the details of the assembly or product.

The table lists for each assembly and product the number of base-items with end-of-life forecast per year.

Click on the number to get a list of all base-items contributing to this number.

Click on the ident number to open a new tab with all the details of the item.

It is very convenient to browse through all indenture levels just by a click on the object. The tabs in the detailed view provide easy access to all properties, whether they are based on your data or imported from external sources.

This is digitization of life cycle management at its best. Get it done.

**GET IT DONE!**

**Status / Life Cycle Risk**  
Assemblies with numbers of predicted EOLs and actual LTIs cumulated by years. Click on numbers to show list of affected base items.

Ident	Level	Overall	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	>2031
6030-1027-02	2	4	0	0	0	0	0	1	3	0	0	0	0
88099_02	3	383	23	2	0	6	20	42	249	0	13	2	6
AOR_E	2	0	0	0	0	0	0	0	0	0	0	0	0
DDM_Lvl03.02	3	0	0	0	0	0	0	0	0	0	0	0	0
DDM_Lvl03.03	3	0	0	0	0	0	0	0	0	0	0	0	0
DDM_BOM05	2	0	0	0	0	0	0	0	0	0	0	0	0
DDM_Lvl04	3	0	0	0	0	0	0	0	0	0	0	0	0
DDM_Lvl01	3	0	0	0	0	0	0	0	0	0	0	0	0
Test-Asly-L1-01	3	177	10	0	0	0	17	34	0	0	0	0	0
Test-Asly-L1-02	3	200	12	1	0	0	14	23	0	0	0	0	0

**Object Details for Test-Asly-L1-01**

Property	Value
Ident	Test-Asly-L1-01
Manufacturer	MOCCI (My Own Company d4d E)
Name	Assembly Level-01
Description	Control Module, 100 pcs/a
Type	Assembly
Risk Class	High Risk
Organizations	Test R&D
Level	3
Date Created	0001-01-01
Created By	7501-101-101
C-Status	Critical
Price	

**Base Items for Assembly 88099\_02 with EOL in 2025**

Ident	Manufacturer	Status
742792031	WJFSTH	Active
CRCW04021420FK0D	VISHAY	Active
CRCW0605590FK0E	VISHAY	Active
RN4122STTE1R00F50	KOA	Active
RS-03K33FT	FENGHUA	Active
SMM02040K1503P000	VISHAY	Active

# Obsolescence risk modeling

**lcm.cockpit**

Projection target year: 2031, LCI level: 50

**Risk counter: number of items exceeding threshold of LCI=50 over time until 2031**

Forecast for base items with LCI >= 50

Base items for Test-Asly-L1-01 with predicted LCI values

Table of related items with LCI per year

Ident	Manufacturer	2021	2022	2023	2024	2025	2026	2027	2028	2029
A12345-6789	MyCompany	44	46	48	50	52	54			
B23456-7890	YourCompany	99	99	99	99	99	99			

Any assembly or product can be selected for the obsolescence risk modeling. All items down to the level of base-items are taken into account for the calculation.

The parameters are just the target year of the modeling and the LCI level used as threshold.

Based on the LCI parameters of each base-item the LCI is projected up to the target year. The risk counter value over time is increased by one for every item exceeding the threshold. The table on the bottom lists all items used for calculation.

The second view of the obsolescence risk modeling is the LCI distribution of items in the target year. It displays the number of base-items in an LCI interval of 5.

The table below lists all base-items that contribute to the chart.

**lcm.cockpit**

Projection target year: 2031, LCI level: 50

**Life Cycle Index distribution of items in 2031**

Forecast for base item distribution in year 2031

Base items for Test-Asly-L1-01 with predicted LCI values for 2031

Table of related items with LCI per year

Ident	Manufacturer	2021	2031	Increase
A12345-6789	MyCompany	44	64	20
B23456-7890	YourCompany	99	99	0

The lcm.cockpit brings digitization to life cycle and obsolescence management. It can be used standalone or in combination with pcn.cockpit and mc.cockpit.

Proactive obsolescence management according to IEC 62402 requires an always up-to-date life cycle status based on multiple information sources.

The obsolescence risk modeling based on Life Cycle Index is the innovative approach for proactive planning.

Life cycle management has never been so easy. Consequent digitization with linked objects and powerful algorithms gives you the data to manage obsolescence successfully. Get it done.



# SCIP and Material Compliance Management

## “The component is available, but we are not allowed to use it anymore!”

More and more companies experience the influence of material compliance on life cycle and obsolescence of products.

The Waste Frame Directive (WFD) of the European Union (EU) requests a bill of material (BOM) of all components with substances of very high concern (SVHC) from each company selling or importing products in the EU. This SVHC-BOM needs to be

delivered as a digital dossier in a specific XML format to the SCIP (Substances of Concern In Products) database of the European Chemical Agency (ECHA).

Just think about the complexity to sort out all the different BOM, the items with SVHC and in particular keeping track with all the changes of the SVHC list and of products.

## Imagine having an IT system that does this work for you.

### We have the solution – the mc.cockpit.

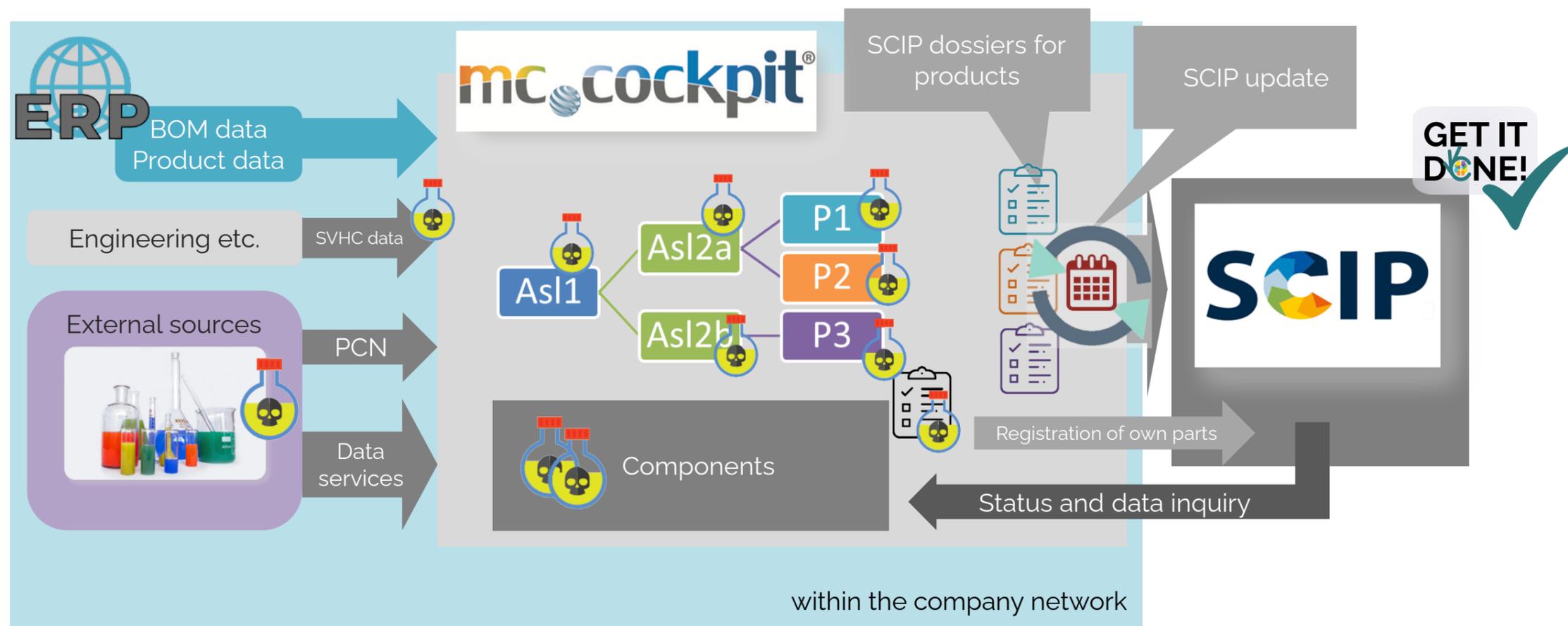
The mc.cockpit uses the same database as pcn.cockpit and lcm.cockpit. This means all interfaces to your ERP and engineering systems are already available. Add SVHC-specific data or import SVHC information from external data services, and the system automatically creates the data needed for the SCIP dossiers. How is that?

You just need to fill in or import some administration information required for the

SCIP database, and the mc.cockpit automatically creates the dossiers and delivers them to the SCIP database.

The mc.cockpit even checks for updates, e.g., with external data services or within your engineering data and automatically updates the SCIP dossiers. Alarms are created in case some data is missing.

Get it done: full compliance with the EU regulations, fully digitized for all your products.



# Consulting

## Get it done! Go forward on the fast track.

The introduction of new tools and new processes has a significant impact on the way people work together in your company, but also with suppliers and customers.

The IEC 62402:2019 is a good standard and provides excellent advice how to implement obsolescence management. We have been involved in the creation of the IEC 62402:2019 as well as in smartPCN/VDMA 24903.

The application of IEC 62402 and the implementation of our tools often lead to questions how the company processes should be built.

Typical questions are:

- How to set up the processes?
- What is the best organizational form for obsolescence management for us?
- How should the interworking between different departments be defined?
- What are obsolescence management policy and plan good for? What is their content?

Based on our vast experience in the business, we have worked with many companies from small to global. Additionally we work in many different industry sectors, which allows us to transfer suitable methods from one industry to another. We are actively involved in life cycle and obsolescence management with services we provide for world-renowned companies with our partner company GMP German Machine Parts.

And finally we are an active part of the obsolescence management organizations like IIOM (International Institute of Obsolescence Management) and COGD (Component Obsolescence Group Germany),

a chapter of IIOM. This gives us many insights, and we benefit from an extensive international network.

We partnered with Syliom Consulting, specializing on life cycle, obsolescence and material compliance management consulting services.

We support you right from the start until tools and processes are working and interworking in the best way for you.

**Contact us –**

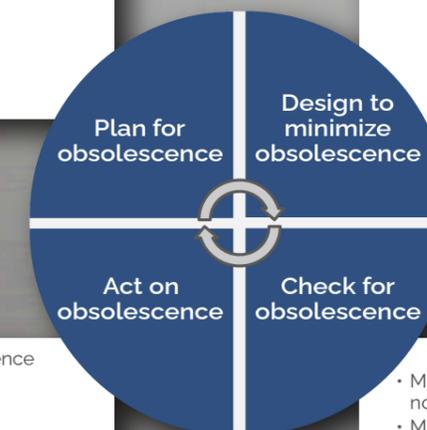
**together we get it done!**

**GET IT DONE!**



- OM Policy
- OM Plan

- OM Organization
- OM infrastructure
- OM early in item's life cycle
- Partnering agreements
- Sustainable Technology
- Manufacturer selection
- Item identification
- Critical items



- Usage list and cross reference
- Assessment of impact
- Assessment of resolutions
- Decide on measures
- Implement measures
- Review OMP: Strategies, approaches, resolutions, item status

- Monitoring of external obsolescence notices and sources
- Monitoring of internal obsolescence events
- Monitoring at all life cycle steps
- Assessment of obsolescence risks



# Go and get it done!

## How to start

What do you need? What are your challenges? How does digitization help you advance, optimize, and improve your obsolescence management? What are your expectations? Let's talk about it.

## Demo and test system

We are happy to give you a detailed introduction and online demo of our tools. Let's set up a test server with some of your example data or sample data from us. Test our systems under real conditions.

## Data

There are many ways to import your BOM and product data. We need some standard data, and you define any other data fields for import.

## Interfaces

We have a lot of experience connecting our tools to other systems. Typically our tools access data in read-only mode. Your IT systems are always the master. However, if needed, we export data to your IT systems.

## Installation, technical support and training

Installation usually takes less than one day if the preconditions are met. We provide live support during installation. Also, we support you in case something does not work as you expected.

A new tool needs training. We provide training online and in physical meetings.

## Process integration and business consulting

A new tool changes the way people do their daily work. We are happy to share our insights how our customers use our tools and our knowledge of implementing IEC 62402. Let's talk.

**GET IT  
DONE!**



# Contact



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