WHY WAIT? GET THE MOST OUT OF YOUR EVATEC TOOL

Evatec's Retrofit Manager *Mehmed Ljatifi* talks about the different benefits retrofits can bring for existing tools, how the retrofit department operates and explains why good preparation is key to success

Tell us how you help your customers?

As a Service Department, we want to show our customers the untapped potential of their systems and how they can access that through retrofits. That could be anything from tackling obsolescence to improve uptime, to adding new hardware / process capabilities or even individual customized solutions. As Evatec's Retrofit Manager, it's my job to organize and streamline the business making sure things run smoothly for the customer. We do this with a team of system specific project managers who collaborate closely with our Product Lines Department as well as the individual business units. The focus is on our customer and their needs to make sure they get the best payback for their investment.

Why are project managers necessary in your team?

Just like customers, every retrofit is at least slightly different even if it looks the same at first glance. We need to work with system specific project managers with a good understanding of the platform and how it has changed over the years. Retrofits can of course also be very complex. An understanding for the whole system and its configuration options needs to be mastered including the specific customer tool and its history. We need to be sure that retrofits we make to address one aspect of performance don't adversely affect another. Only then is it possible to make sure all new elements can be integrated successfully.

What is the difference between machine upgrades and a classic parts replacement? Where is the added value for the customer?

Of course we deal with consumables and other spare parts which can be just replaced 1:1 without further effect on the tool. Classic parts replacement is a "plug and play" story whereas a retrofit is normally much more complex. We define retrofits as where there is a change to the "bill of materials". Retrofits often need software upgrades too. Depending on the complexity of the retrofit it could often involve a much more expensive initial capital outlay, but if we talk about losing USD 1'000.- every hour caused by tooldown, it is self-evident, that every retrofit that brings improvements to tool uptime can easily bring added value for the customer.

Depending on the type of retrofits we can bring a tool back to "new" to extend its working life, expand its capabilities to run processes it couldn't before, or increase its throughput.

Bringing a customer's system fully up to date also brings other benefits too, including reducing unexpected problems. Evatec's comprehensive knowledge through its "digital twin" can also enable improved technical support at all levels.

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Below is a simple guide to the differences between spare parts and a complete retrofit

Definition: A spare part is an extra piece, replaceable component (1:1), or identical to and interchangeable with the item.

- Quote provided by local organization
- In most cases the customer can replace the themselves

Spare Part

VS

Retrofit

Definition: Means a change or modification or improvement made to an equipment / assest that improves the performance, capacity and or capability of such asset.

- Definition of customer hardware / process specification
- Quote provided by Customer Service
- Installation done by Evatec

Types of retrofits

Tell us more about the different types of retrofits?

There are 3 different reasons why a customer should think about retrofits:

Obsolete Parts

Reason 1

Tackling obsolescence is one of the most common reasons. For tools which have been in service for many years, the risk of long tool downs caused by important but obsolete parts breaking gets bigger. The reasons for retrofits could be the same for 2 tools but the retrofit could still differ. Let's explain it with the example of a power supply upgrade on a BAK tool. Upgrading an old EHV to the current standard EHV 510 for a customer in the US is not the same as for a customer in Europe, because an additional transformer needs to be bought by the US customer as they first need to step down from 460V to 400V. However, customers often gain additional benefits in other areas even when they retrofit for obsolecsence too. Take an obsolete server that needs to be upgraded as an example. New software will be available with many additional functions and therefore enhanced capabilities.

Enhanced Capabilities

Reason 2

Direct requests for enhancing capabilities is another common request by customers. As component technologies improve we can often help our customers do more such as increasing process throughput by upgrading power supplies for higher coating rates. Retrofitting new improved process control technologies like the latest quartz or optical monitoring technologies for more accurate layer termination can help customers realise new processes that they couldn't achieve before, improve process repeatabilities where yields are sensitive or simply save money.

Customised Retrofits

Reason 3

Then there are also customer specific retrofits like special tooling designs unique to their own substrate geometries or process requirements. Other examples could be handling conversions from 6 to 8 inch and so on offering customers flexibility to swap between different substrate sizes easily in their daily production.

"Retrofits offer huge potential for enhanced capabilities and improving output"

Extending working lifetimes and enhancing capability

You can find more information out at
www.evatecnet.com/service/retrofits-upgrades

You can find more information out at
www.youtube.com/watch?v=okXh4ast05A

How about new ideas for retrofit services?

We are always looking at new ways of helping customers. One new area is in the field of obsolescence where its often impossible to find replacement units. With Evatec's so called "golden units service" customers can loan parts in an emergency case against a fee while their retrofit is being prepared The unit is then returned to us so we can help other customers if they run into the same situation.

How does the retrofit ordering process work?

Prior to every retrofit our ideal process involves screening and mirroring the actual situation of the complete customer system with a tool audit executed by a Field Service Engineer. Even more helpful is a full "health check" to recognize further weaknesses and the improvement potential of the system as a whole.

Once the costs and scope of retrofit are confirmed including any tests which need to be conducted on completion of installation by the Evatec engineer an order can be placed by the customer. Our order processing groups will need to check, systemize, and confirm it before the Evatec project leaders responsible manage the project until installation is completed on the customers system. There are many different internal stages of the project including "kick off", engineering, initial procurement, parts receipt, assembly and packing, creation of documentation including any new schematics etc, before shipping and installation is arranged often in collaboration with our local sales and service organization.

What are the biggest challenges you face in your daily business?

The demand for thin film coating capacity has grown dramatically over the last few years. Of course, this is very good for our business as we deliver new tools but it also drives the demand for retrofits as customers look to their existing tools and how they can maximize benefits more quickly than waiting for delivery of a new tool.

The COVID pandemic created huge challenges for all, but often also made the retrofit process more challenging with difficulties for access on site for surveys, tool health checks or installation work. Limited availability of electrical / electronic components and raw material as well as limited manufacturing capacities or unexpected delays on the supplier side also pushed out lead times for retrofit projects. We certainly need to avoid uncomfortable situations where we start the retrofit installation and then sudden / unexpected issues occur because the preparation with pre retrofit audit was not completed as we want. This is especially true for some of the oldest systems with unknown condition.

Is there anything else you would like to share with our readers?

More than anything we would like to encourage and support our customers in their planning. With delivery issues at some suppliers our customers are starting to recognize the importance of advance planning of retrofits rather than waiting until the tool is down. We know our customers are all busy with day-to-day things but our job is to help them understand the cost savings they can make and budget. That helps them avoid not just a short term down time while we search for parts but avoid much more costly longer downtimes of potentially weeks because parts are obsolete and no replacement is available. ◻