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# Juicy Apples Come From Healthy Trees: Advice For Platform Developers

by Daniel Chancellor

Speaking at BIO-Europe Spring, three leaders of platform life sciences companies offer advice on their scalable and lower risk business models that support innovation within partner biopharma companies.

Are platforms the new products? That was the question posed during a BIO-Europe Spring panel discussion with industry leaders from prominent platform companies operating across the spectrum of life sciences. These included the scientific and therapeutic expertise at [Evotec SE](#), the proteomics know-how of [SomaLogic, Inc.](#), to the emerging field of AI-enabled drug discovery in which [Insilico Medicine](#) operates.

The discussion spanned the overlapping definitions of products and platforms, balancing investment in each strategy, communicating value to partners and investors, and innovating to remain ahead of the curve. Clearly, platform biotechs play a hugely important role in facilitating the development of novel drugs and diagnostics, but their growing influence does not come at the expense of product companies. The analogy of an apple tree, with healthy roots, a solid trunk and with the right conditions produces an abundance of fruit, eloquently summarizes the position of platforms and the challenges they face.

## Fruit At Scale For Others To Pick And Sell

The precise definition of a platform biotech company is subject to interpretation, but there are a set of common, unifying features. Platforms exist based on a proprietary, foundational technology and expertise that is valuable to partners.

As described by Michelle Chen, Insilico Medicine's chief business officer, "platform means using technology in a way you can generate multiple products and multiple service solutions. I'd like to think about an apple tree as an example, where the technology platform means the tree trunk and the product means the apples," she explained. In the case of Insilico Medicine, the trunk is the Pharma.AI platform, and the apples are the products, which come in two types. The first is

software products, which Insilico calls AI software product solutions, that can be licensed and turned into tools for potential customers. The second type is the drug assets generated using this platform for the company's internal pipeline, as well as for its partners' pipelines.

This technology allows the creation of assets at a scale and efficiency that cannot be achieved with a strict focus on products. "One of the benefits of platform companies is the ability to create lots of apples, rather than a small tree that only grows one apple; this scale can be helpful", commented Roy Smythe, the CEO at SomaLogic, which specializes in the creation of high-plex protein pattern recognition diagnostic tests.

Platform companies primarily exist to serve customers in a partnership model, thus allowing a sharp focus on technological expertise and removing downstream risks associated with late-stage development and commercialization. For Evotec, the focus on deep partnerships ahead of transactional services-style agreements is important. "The core of a platform provides access to something which is comprehensive, integrated in a manner so that the partner of choice does not have all these interfaces to go to other companies for testing. It's all integrated from the beginning to the end," summarized Bernd Muehlenweg, senior vice president of Evotec Innovate Strategic Initiatives.

While there are examples of platforms that yield products that go through the entire R&D process unpartnered, most notably in emerging drug technologies such as cell, gene, and RNA modalities, these are in the minority, and they arguably transition into product-based companies.

Smythe explains that you need to strike a careful balance between commercializing products that may end up competing with customers. "Platform companies know not to be greedy. You have to be careful about how many of these things you want to put on your own commercial platform to sell versus those that you're facilitating for others, because you can create a competitive environment that could be damaging over time."

### **The Tree Must Be Nurtured And Invested In...**

The platform business model fundamentally exists on the strength of foundational technology. For a newer company, this poses a challenge when communicating to investors and partners, because they lack "proof points or reasons to believe, which are revenues for the most part", according to Smythe. "One of the problems with platform businesses is that you often push real revenue out in time and you have to wait for those products that you co-develop to market share," he said. It therefore requires commitment to continue to invest in the platform in the early stages of a company, potentially at the expense of product development.

AI-enabled R&D companies such as Insilico Medicine can take a hybrid approach, partly in response to the proliferation of deals being signed with pharma partners, providing upfront

payments, but also due to the highly competitive nature of the space. Such companies are seeking to differentiate on the speed at which they can generate clinical-stage candidates, essentially providing a shop window for the supportive technology.

This then provides feedback by which the processes can be iterated and improved upon. Chen explained: “For platform companies to continuously thrive, we have to continue to invest. You have to make sure you give it water, fertilizer, and pest control. That's absolutely critical for Insilico. Internally we have the debate about whether we should continue to invest in those software solutions, and whether to focus on the drug candidates that come out of our pharma platform. We decided to continue both, because in order for AI to continue to be relevant, it's very important to collect the real-world data back.”

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Evotec is one of the most mature platform life science companies, with an almost 30-year history of supporting drug discovery. While Evotec does create assets in the form of new chemical or biological entities, it has avoided the temptation to build an internal pipeline and run clinical trials. Muehlenweg explained: “If we invest into platforms, we are generating our own product candidates as a coincidental result. I wouldn't make a harsh cut between the platform and product development. There is also a very large grey zone in between, where a dollar invested is invested into essentially both.”

### **... Even Though The Fruit Is The Ultimate Arbiter Of Quality**

Despite investment in platform companies largely supporting the underlying technologies, it can be difficult to adequately assign value and understand competitive differentiation, without having products at the end. Platform mRNA companies such as [Moderna, Inc.](#) and [BioNTech SE](#) have been carried to their stratospheric market valuations on the success of COVID-19 vaccine revenues, while their relatively unheralded competitor in [Translate Bio](#) was acquired by [Sanofi](#) for a mere \$3.2bn. Continuing the theme, Chen explained that it is “hard to assess the value of the trunk of the tree until you start tasting the apples... that's exactly what we're doing

with our internal pipeline development.”

It is therefore important to create an environment in which products and associated revenues can be realized, thus allowing the continued maturation of the platform technology. Few platform companies can achieve the scale required to fully reach their potential in the absence of new partnerships. Speaking on behalf of Evotec’s experience, Muehlenweg noted: “Only if you have a huge pipeline of products can you afford to say with certainty you know there will be income coming through. Revenues really make a difference, in particular to younger companies, which have this long valley of death in front of them.”

Insilico’s Chen has a broad background that spans large pharma and smaller biotechs, including a stint at Abgenix with its XenoMouse technology, later acquired by [Amgen, Inc.](#) The deal value was exclusively assigned to the lead asset, the EGFR antibody panitumumab, which was successfully commercialized as Vectibix for colorectal cancer. However, of the 20–30 other partnerships done with the Abgenix technology, no other products came to light. “A lesson to learn is that when you’re trying to put apples in many different baskets, you may not have enough energy to focus on your own pipeline. It is a management call, but as a public company we may also have a lot of investor pressure in which direction they want us to go.”

### **Platforms Should Be Mindful Of Adjacent Fruit To Remain Relevant**

Throughout its history, Evotec has remained a relevant scientific partner to biopharmaceutical companies as the broader trend has moved away from small molecule drug discovery. Rather, biologics have steadily gained an increasing share of the industry pipeline, reaching an all-time high of 45% in 2022 according to the latest Pharma R&D Annual Review, published by Pharmaprojects. (Also see "[Industry Flying High With Record-Breaking First Novel Launch Tally in 2021](#)" - Scrip, 28 Apr, 2022.)

Even within the biologics segment, there is increasing sophistication as advanced drugs pivot towards modalities employing genes, cells, and RNA as the therapeutic. Living through this upheaval, Muehlenweg described the transition. “If you look at the last three or four years of Evotec, we can now do antibodies, we can do antisense oligos, we have gene therapy in house, we have cell therapy in house,” he explained. “All the other elements of the infrastructure, such as running IND-enabling studies, just needed to be adopted to these new modalities.”

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The questions that platform companies must ask themselves in the long term should center on aligning core capabilities with broader scientific advances. Where am I good at? Where do I have to invest to stay top notch? Which elements can I plug in that enable me to become even better, plus offer the opportunity to broaden scope? If you can get this right, “all of a sudden you have bananas on the tree as well”, quipped Muehlenweg.

The same holds true in the diagnostics space, where there is vast untapped potential in proteomics that incumbent DNA sequencing companies have been slow to explore. It is here that SomaLogic is seeking to lead, while being mindful that its successes will pave the way for competitors. “If your technology doesn't evolve over time, you become commoditized,” said Smythe. “If you want to be successful over a long period of time as the platform company, you better evolve your technology because others aren't standing still. And then, of course, the products that are derived from your technology should continue to be innovative.”

In a final piece of advice, and in response to the question of the panel, are platforms the new products, Smythe struck a positive final note: “I don't know that I would say that platforms are the new products, but I do believe that platforms have the ability to create product solutions and services at a scale that transactional companies cannot... if platforms are not the new product, they are potentially the new competitive advantage.”