Building a Life Sciences Digital Ecosystem

Content for this article was contributed by the EVERSANA Asia Pacific team

In the life sciences world, we hear more and more of the requirement for digital ecosystems in various therapies. What do we mean by these, and what benefits do they provide?

A digital ecosystem is a network of multiple stakeholders who collaborate to enhance delivery to patients. A healthy, sustainable ecosystem benefits patients, prepares companies to adapt to economic changes, builds patient loyalty, creates new revenue streams and lowers patient acquisition cost.

Creating a sustainable digital ecosystem implies creating sustainable elements. Examples outside the life sciences industry include the following:

- **BMW** leverages its first-in-class **data management,** allowing its users to have premium security and privacy.
- **Google Nest** is **collaborating** and constantly expanding by onboarding AI-dominant players like Fitbit and Mercedes.
- **Caterpillar** enhances its **value proposition** by shifting from a hardware to a solution-based business model by partnering with companies prominent in AI technologies.
- **Amazon innovates** while expanding its robotics technology beyond warehouses to benefit end users and developers.
- **Tesla** is creating an ecosystem with the **mission and vision** of fundamentally redefining the boundaries of the automobile industry.
- **Apple's** ecosystem is excellent in **user retention** with high brand loyalty among customers.

The key role played by life sciences in human health has been highlighted by the COVID-19 pandemic. Collaboration is increasing among traditional competitors, government, payers, hospitals and clinics, research institutions, non-profits and other organizations, aimed at developing common solutions to improve patients' lives.

Digitalization in life sciences is increasingly focused on providing key elements in new therapies, medical devices, technologies and infrastructure required to reach patients, treat them or provide them with support.

An ideal life sciences ecosystem helps patients at all stages of their journey, including:

Awareness, healthy condition maintenance and risk prediction for patients who are healthy or at a preclinical stage, unaware of the disease;

Accurate diagnosis for early-stage patients who are suspected of developing the disease;

Drug treatment for patients seeking treatment; and

Improved quality of life for severely affected patients under medical care.

In one example, a Japanese company wanted to build a digital ecosystem platform for prevention, early detection, treatment and care of a neurological disease with no currently approved treatment. As a first step, they wished to identify stakeholders for partnerships/ acquisitions and delivery pathways to use AI to reach patients in pre/early disease stages.

An important step was ideating and identifying **six target stakeholder categories** for accessing patient data and reaching out to at-risk patients:

1. **Digital:** This space is a major data source to identify patients with preclinical disease. Digital biomarkers can be analyzed by AI platforms via wearable devices and mobile and tracking apps.

2. **Claims data:** Partnering with insurance companies can provide access to individual claims data; new users can onboard to the platform once insurance companies agree to pay.

3. **Electronic Health Records:** Collaborating with EHR vendors can help a company reach physicians directly after analyzing patient-level EHR data.

4. **NGOs:** Data from NGOs can be used to reach marginalized and under-researched patient groups, especially in developing countries.

5. **Patient registries:** Patient registries can provide access to large and diverse patient data collected in epidemiological, research and quality of care studies.

6. **Government:** Collaborating with governments across continents can help upscale the ecosystem.

The company mapped all the stakeholders and identified alternative ways to partner with them to obtain access to patients and their information. Various scales of ecosystem were considered, based on different partnership configurations.

They also developed clarity on each stakeholder category and each ecosystem element for each target segment. They were able to apply the ecosystem design to different markets by building unique narratives for each stakeholder type.

Creating a successful ecosystem benefits its creators and end users by providing a more complete solution and access to a wider range of patients. In many indications, companies and their pharmaceutical offering form only part of the patient solution and require partnerships with multiple external organizations and stakeholders to reach patients and provide complete solutions offering real benefits.

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