THE DIGITAL SERVICE DESIGN REVOLUTION: USING DISRUPTION TO YOUR ADVANTAGE

How assessing your enterprise’s digital maturity can help find digital opportunities that would rapidly disrupt your business but give a significant returns leg up

There’s a service design revolution going on. Service design means looking at things entirely from the user’s point of view and designing services that satisfies user needs holistically. For life sciences, this means disruption of established business models, but this disruption brings in significant returns. This paper presents a framework for introducing digital service design into any life science business.
For decades, the life sciences industry has operated with disparate components — silos that separate R&D, commercial, production and supply chain. These silos have walled-off parts of the organization, disconnecting them from the external-facing parts which are responsible for managing relationships with regulators, policymakers, the medical community, and the rest of the industry. This has created barriers to patient access and engagement, and bred inefficiency. Over the last few years, however, that picture has started to change. And the initiation of this change has come from the customer’s end. Having adopted digital in a big way, making it a part of their everyday life, customers now seek digital tools to manage their healthcare as well. Digital innovation and touchpoints are a great way to engage, maintain relevance, and drive conversations. But for life sciences enterprises, this means disrupting established business models. They will first need to recognize the need to disrupt their business model before their competition does. Internal business units – from marketing, sales, clinical, R&D, quality and compliance, IT, suppliers, and investors – will then need to align themselves to create new experiences for their end users (patients, surgeons, care providers, and others) with the help of digital technologies.

On road to disruption

The starting point to embracing digital disruption is a structured approach to assess the enterprise’s digital maturity based on an understanding of not just the technology, rather the ‘big picture’ of what digital engagement means to the business.

Assess the current state

Current state assessment gives a complete view of digital patient engagement services by finding out how different enterprises view patient support programs and run their digital patient engagement services. We utilize specialized tools / metrics designed to highlight how different departments perceive digital as a value generator through service design for patients. Deep dive clinical immersions and internal stakeholder discussions help us assess how different digital touchpoints are aligned to patient journeys, the benefit it drives as a perceived value for patients, and the returns it delivers for the enterprise.

Disruptive insights through:

- Stakeholder workshops with various internal business teams
- Experience visioning
- Future user stories
- Ideal user journey
- Service design idea bank evaluation
- Service blueprints
- Ethnographies
An inquiry into:

- Various needs of the business units in different disease areas
- The number of patient support programs/projects currently running in different business units
- The budget allocated to the digital outreach initiatives
- The star programs of the year where patients have benefited with 360 degree collaborative care
- Digital towers that different BUs/therapy-wise practices have invested in to listen to their patients, HCPs and other care providers
- Existing real-time analytics running across various patient support programs to gauge the actual patient/user journey
- Digital projects initiated/currently running where investment is in patient’s easy access to information (directly to patients/other channels)
- Digital technologies such as artificial intelligence, data, cloud and others that have been transforming the business
- Partnerships with any digital start-ups to disrupt the way patients are empowered to manage their disease (early onset, chronic or palliative)
Infosys Digital curates over 100 market and technology macro trends across industries such as retail, banking and financial services, insurance, and manufacturing. Future state assessment workshops are our avenue for ideas, methods, approaches and enabling technologies that are focused on removing frictions of time, distance, access, and information for the patient to manage their disease condition. The outcome of these workshops is a detailed digital roadmap for a specific business and blueprints which includes details of digital touchpoints, key roles of partners, channels, business model, and revenue streams.

**Determine the future state**

**Two-pronged objective**

Convenience, comfort or simplicity with pervasive simplification, quality product/service/experience, improved communication, efficiency and efficacy or productivity

**More momentum with shorter cycle times or reduced cost for the patient**

**Future vision:**
**Designing experiences for the future**

Our ethnographers, anthropologists, clinical advisory, domain experts, and technology geeks deep dive into patient journeys to uncover the moments of joy, anxiety, frustrations and truth at various stages of the care continuum. Each of these moments results in service design evidencing where digital touchpoints come to play.

The overlaps of the internal business and unmet patient needs are the sweet spots for digital innovation.

**Why?**

To have a clear long-term goal and aspirational patient experience, and market position to navigate towards

**What?**

A visual and textual description of the overall future experience that the user must have when interacting with the brand in the future

**How?**

The prioritized opportunity spaces and key insights are described and turned into a clear vision statement supported by a visual vision concept or future customer testimonial
From current to future state: How we get there?

- Adopting a design thinking approach that aligns with the business strategy
- Establishing governance mechanisms to achieve the future state
- Evidencing triggers for patient-focused initiatives
- Creating a pull and demand for various patient-focused programs and campaigns
Embracing disruption

Recently, we conducted a deep dive evaluation of the patient journey of lumbar micro discectomy surgery in an ambulatory care setup. The underlying need was to assess the effectiveness of ambulatory care setups for the disease with digital-enabled solutions. Lumbar micro discectomy is typically performed for a herniated disc to relieve the pressure on a spinal nerve by removing the material causing the pain. The deep dive evaluation enabled us to plot disruptive digital opportunities that are clinical and administrative with services integrated to provide care to a patient holistically.

The infographics below highlight the patient journeys and detailed opportunities at every phase of the disease progression and the services a life sciences or medical technology organization need to adopt to reach that last mile to deliver care through new business models in ambulatory care setups.

A typical lumbar micro discectomy patient journey in an ambulatory care setup

A micro discectomy patient interfaces with multiple stakeholders who work collaboratively to deliver care.

<table>
<thead>
<tr>
<th>Patient</th>
<th>General Physician</th>
<th>Orthopedist / Neurosurgeon</th>
<th>Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Experiences acute back pain (&gt;6 weeks) / subacute pain (6-12 weeks) / chronic pain (&lt;12 weeks)</td>
<td>2.1 Performs physical checkup and prescribes pain subsiding medicines</td>
<td>3.1 Schedule initial consultation with orthopedic and conduct tests</td>
<td>4.1 Pre surgery regime adherence to hypoglycemic therapy or anti-hypertensive treatment</td>
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<tr>
<td>1.2 Uses alternate / home remedies and pills to remain active but with poor quality of life</td>
<td>2.2 Recommends physiotherapy for relief</td>
<td>3.2 MR diagnoses L4-L5 disc prolapse</td>
<td>4.2 Help deal with anxiety about health, surgery success, insurance, recovery, and more</td>
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<tr>
<td>1.3 Approaches physician when the pain becomes unbearable</td>
<td>2.3 Performs a diagnostic evaluation of blood and X-ray, based on which refers to a orthopedic physician</td>
<td>3.3 Refers neurosurgeon with first line of treatment</td>
<td>4.3 Help patient learn about the procedure, surgical center and various pieces of diagnostic and surgical equipment</td>
</tr>
<tr>
<td>Virtual assistant to interface with the patient</td>
<td>Patient digital diary comprising test reports, care plan, and health progress</td>
<td>Value-added services with physiotherapist and spine fitness score with respect to the care plan</td>
<td>4.4 Agrees and signs-off the surgery date</td>
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<tr>
<td>Patient education and awareness campaigns</td>
<td>An intelligent scheduling system that takes into account patient covariates and schedule diagnostic tests and specialist consultations efficiently</td>
<td>Right patient to the right facility</td>
<td>Connecting with family, educating the patient about the surgery and the facility, insurance, help make informed decisions on payments and services</td>
</tr>
<tr>
<td>Patient education &amp; awareness campaigns - outreach</td>
<td>E-consultation and dynamic smart appointment scheduling</td>
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<td></td>
</tr>
<tr>
<td>Locate my nearest spine ambulatory care</td>
<td>E-appointments and e-consultations</td>
<td>Integrated EMR / HER systems that seamlessly collate results and schedules to provide a roadmap to the patient / providers on the possible timelines for better resource planning</td>
<td></td>
</tr>
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<td></td>
<td></td>
<td>AI system that can segment patients based on clinical results and predict the best MIS option over traditional ones</td>
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Disruptive Opportunities: Clinical Administrative Clinical and Administrative
Every digital service design opportunity in the lumbar micro discectomy surgery in an ambulatory care setup example had technology-enabled data and insights that fuelled an innovative feature in care delivery, such as 'the right patient for the right facility'. Demography-wise patient data enabled assessment of ambulatory care setups to address the needs of a patient population in a given locality. Not just that, an artificial intelligence system would help segment patients based on clinical results and predict the best MIS option over traditional ones.

Clearly, the future will belong to enterprises that seize these digital opportunities, making care democratized, connected, collaborative and personalized.