Launching a successful digital health start-up in Europe

Lessons learned with mySugr

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The bigger picture

For over a decade, digital health has been proclaimed as "the next big thing" for software to revolutionize. For evangelists, it was inevitable that the trillion-dollar healthcare industry was ripe for disruption. Silicon Valley start-ups fueled by Sand Hill Road capital were ready to take a shot. And while the last 18 months seemed to prove the advocates right[1], when it comes to digital, Europe has not seen much action as a global health care industry hotspot. Compared to the US, the numbers of deals, funding and exits are insignificant. Not surprisingly, success stories are an even rarer breed.

One of those rare success stories however, and probably the first well-known exit within Europe, is the diabetes app mySugr, which Roche acquired in 2017 for as much as $100M (the exact number is still undisclosed). Small by US standards, but an outlier in Europe. Four years later, the story of mySugr still offers valuable lessons for the European digital health landscape.

This case study spotlights mySugr and its acquisition to tell its story and identify the factors that contributed to its success. Peter Thiel famously wrote in his bestseller "Zero to One"[2] that all start-up successes are somewhat unique, a hypothesis we contend with. The goal of this case study is simple: Expand our collective understanding of the digital health ecosystem in Europe by exploring its underlying dynamics.

mySugr at a glance

The mySugr app for diabetes patients was founded by Frank Westermann, Fredrik Debong, Gerald Stangl and Michael Forisch. Already in 2010 (a year in which doctors still frequently asked for fax numbers), Westermann and Stangl explored the idea of an user-friendly diabetes app for smartphones. Shortly afterwards, Debong joined who brought a—back then—quite unique expertise of both MedTech and software design to the team. With a diverse set of backgrounds and a first-hand understanding of the condition (two of the four founders live with diabetes), the group launched mySugr in 2012. The goal was to provide diabetes patients an easy-to-use and convenient tool to manage their condition.

MySugr raised €6M in three equity rounds, first from the Austrian business angel Hansi Hansmann, then XLHEALH (whose partners are now Digital Health Ventures) and lastly iSeed Ventures and Roche Ventures. In 2017, Roche acquired mySugr for up to $100M, which was arguably the first largescale and well-known digital health exit in Europe.

Managing diabetes:
The market prior to 2012

To understand mySugr's approach, let us first analyze how patients managed the condition without a digital aid and the diabetes treatment market in 2012. Simply put, diabetes is a condition in which the body is unable to manage its own glucose level with endogenous insulin. Before mySugr, managing diabetes was a manual process for patients, as illustrated by the figure besides.

Patients measured their glucose level up to ten times a day with small meters and test-strips provided by different Diagnostics companies and mostly paid by insurers—per unit. Based on glucose levels shown on the meter, they recorded the results manually and then analyzed the data (considering upcoming activities and diet) to determine the amount of insulin they had to inject. For a diabetic patient that could mean up to 300 measurements and potentially life endangering decisions a month. Figure 1 illustrates this process. It also highlights two realities that, retrospectively, were essential for mySugr's success:

- Managing diabetes was a difficult process that puts a lot of responsibility on the patient.
- Diagnostics and MedTech companies were excluded from a crucial part of the treatment journey.

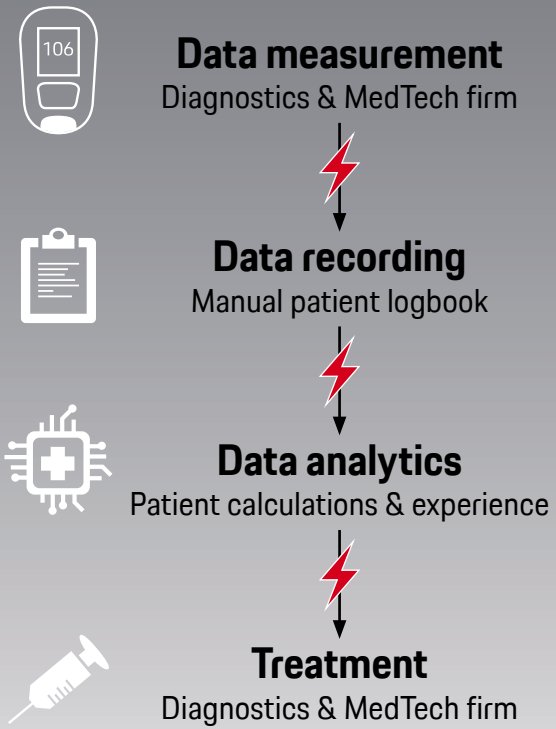

Fig. 1. The fragmented starting point of glucose management from a patient's point of view

The business case: "making diabetes suck less"

The mySugr team set out to change the patient experience and "make diabetes suck less" with their digital diabetes logbook. The premise was that a successful diabetes app needed to do more than just digitalize the data recording process, but become an important tool that adds value to the life of its users. Therefore, they heavily focused on a) the user experience by designing their solution as motivational ("Gamification") and b) making the recorded data as actionable as possible. For a), Debong's research in gaming was crucial, and they introduced the—back then—relatively new concept of gamification: Patients were able to enter the data in a convenient, almost seamless way, motivated by a positive feedback loop, automatically responding to its user (not possible with the average Moleskin).

First, the mySugr team targeted the B2C market with their diabetes diary app via a freemium model to reach a significant number of users. They focused heavily on adoption rates and aggressively grew the number of patients/users (1'000 in the first year, 30'000 in the second and eventually reaching millions). Already in the second year, the team set-up offices in the US. Targeting the US is a common approach for MedTech and Biotech companies; European firms often start commercialization in the US because it can be easier from a regulatory perspective and the willingness to pay is higher. For a digital health company (or any app in general) however, this was a rather unusual and bold move. Scaling on one continent is hard enough, but scaling on two continents is another challenge entirely. As a platform whose monetization strategy was rooted in the future, there was not much impact on the bottom line—for now.

Simultaneously, the team was also committed to pass all regulatory requirements to achieve CE and FDA approval. Back then, this was an arduous undertaking as there was no clear pathway for CE-approval for software companies.

These two strategic moves—hypergrowth and regulatory approval—were crucial for mySugr's success. It laid the path for its future commercialization and served as the proof-of-concept for their business case. They were now taken seriously by potential B2B partners that were strongly needed for monetization.

mySugr B2B partnerships:

A corporate & start-up marriage

From the get-go, the founders knew that—in the long-run—mySugr will be monetized via B2B partnerships, for example with diabetes-focused MedTech firms that offer insulin or glucose monitoring devices and test stripes e.g. Sanofi, Novo-Nordisk, J&J, and precisely also with Roche.

With increasing user numbers, the type of B2B collaboration however, changed. At the beginning, mySugr was predominantly seen by MedTech and Diagnostics companies as a B2C marketing channel to promote their existing product portfolio (e.g. glucose meter, test strips). It was a platform to reach 1'000, 10'000 or 100'000 potential customers.

However, integrating their products with the mySugr app achieved more for MedTech and Diagnostics players than just promote products. It could potentially close a strategic gap in the treatment journey (see Figure 1 again). In the last decade, glucose meters and test strips increasingly became commodities with stiff competition among MedTech companies such as Roche. They had to rethink their strategy to differentiate on the market. Owning the whole treatment journey could be a strong USP. Internally, Roche had already worked on a digital solution very similar to mySugr to interact with patients along every step of the treatment journey.

However, in 2017, they decided to acquire mySugr directly and by integrating their portfolio with the mySugr app, all parties won: Patients were able to transfer their data directly from their meter into the app, Roche closed their strategic gap and stood out from the competition, and mySugr got a strong partner for future endeavors.

In 2017, parallel to the acquisition of mySugr, the first insurance companies included mySugr in their offering and provided recurring bundle payments to their customers, because studies demonstrated that its use improved patient outcomes. Here, the CE-approval of mySugr was crucial to get the opt-in of insurance companies to start the studies. For both Roche and mySugr, this was the point at which the investment (and in the long-run, the acquisition) started to pay off because it changed the business model from pushing units (glucose meters/test strips/app downloads) to subscription-like models worth around several hundred euros per year. For instance, a complete Roche bundle including the mySugr Pro app with a personal diabetes coach incl. a glucose meter, glucose lancing devices, lancets, as well as unlimited test strips, marketed a price of € 999 per annum in Germany. Typically, this is fully reimbursed.

In addition to supporting mySugr's clinical studies, Roche's global market presence and knowledge about local specifics concerning patient care, reimbursement and regulatory frameworks were a key to accelerate the rollout to countries outside of Central-Europe and the US. Today mySugr is available in 79[3] countries across the world.

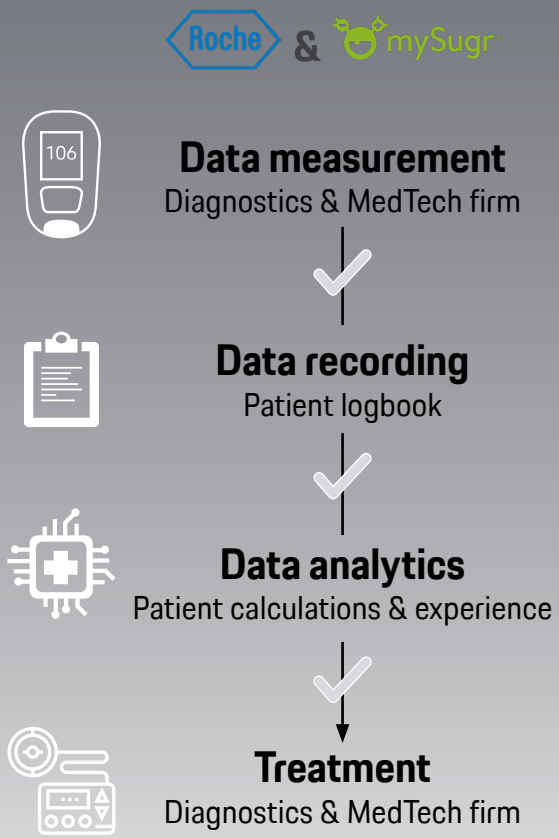

Fig. 2. Roche and mySugr's holistic glucose management process from a patient view

Post-acquisition

Fast-forwarding to the present, the diabetes management market as well as the joint go-to-market of mySugr and Roche have heavily evolved. With the emergence of continuous glucose monitoring devices such as Freestyle Libre pushed into the market by competitors like Abbott, and the initiated commercialization of connected insulin pods that can also (semi-) automatically inject required insulin doses, the market is quickly moving towards a fully end-to-end patient-centered disease management process.

It is therefore time to examine how mySugr and Roche have fared since the acquisition, and how they have adapted to the evolution of the diabetes management market. Was the acquisition —in hindsight—the right choice? It is difficult to separate their product portfolio, because Roche and mySugr heavily integrated their solutions in a holistic offering to the patient. Looking at sheer numbers, mySugr still is one of the most successful diabetes management apps available. With cumulative downloads of approximately 4.67 Mio. and a quoted 0.35 Mio. active users, the app has found good traction in US (holding about 50 percent of user base) and select European markets—Germany in particular (20 percent respectively)—and boasts an average of 70 - 80k downloads per month on a global scale.[4]

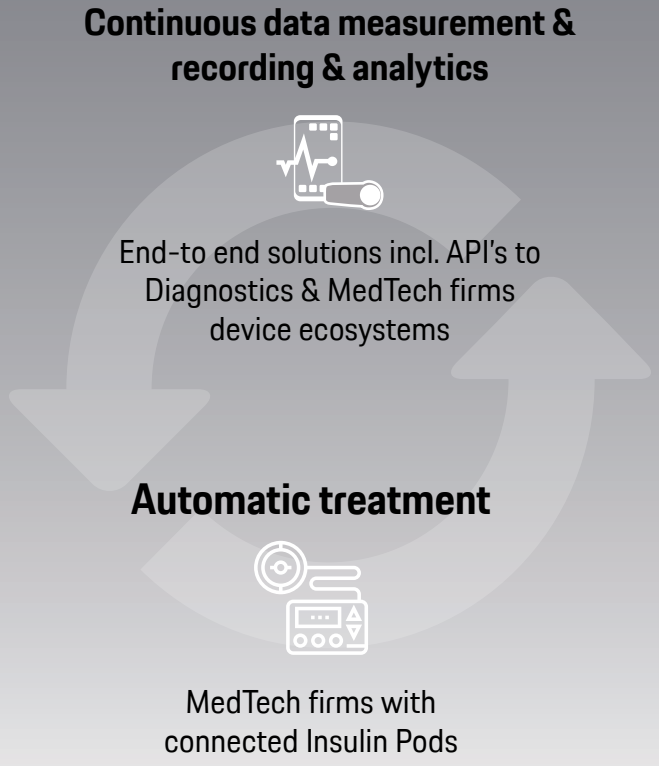

Fig. 3. Evolving patient-centered disease management process for type-1 diabetes

However, MedTech competitors such as Abbott have managed to catch up with the launch of their Freestyle LibreLink app (diabetes and blood glucose tracking) in February 2018. By closely integrating their technology with the app, Abbott achieved cumulative downloads of 4.50 Mio. and an active user base of 0.74 Mio. with larger traction in some of the more challenging European markets such as France or Spain, rapidly growing at an average 187k downloads per month across the globe.[A] In response, mySugr started offering other subscriptions without bundling-in Roche equipment as done in Germany, pricing this service at € 357 per annum. Additionally, mySugr and Roche opened up to other MedTech players' product ecosystems. In October 2018, they inked a deal with NovoNordisk to integrate insulin pens into the app. Smart pens from NovoNordisk that automatically transfer insulin-dosing information to the mySugr app became available to diabetics in Europe as of April 2021. While on the one hand having a sizable MedTech player in the background might have helped the mySugr team in negotiations and to grow, it remains notable that a strategic investor limits their ability to be seen as a fully device-agnostic player. This might be the reason why driving alliances with rising players such as DexCom or OmniPod have yet to be concluded.[B]

(A) *Competitors on the diabetes app front with a focus on diabetes management app include Diabetes buddy (1.69 Mio. cumulative downloads, thereof 0.77Mio. in the US), Diabetes:M (0.77 Mio. cumulative downloads, 34k active users mostly in the US, some in UK and Canada)*[5]

(B) *Other diabetes tracking and recording apps commercialized directly by MedTech firms include OneTouch Reveal (3.1 Mio. cumulative downloads, 285k active users, with largest traction in US and Canada), One Drop for Diabetes Health (2.6 Mio. cumulative downloads, 62k active users with largest base in US, India, and Mexico), as well as Dario Health (0.49 Mio. cumulative downloads, 61k active users)*[6]

Success factors for mySugr and Roche

Highlight criteria responsible for the mySugr/Roche success story:

01 // A good product: Having a good idea doesn't make a business case. Execution is key.

mySugr was the best-in-class product. It seems like a lazy answer but is nevertheless true. Obviously, assessing a product's quality is not straightforward considering factors like individual preferences. However, a key metric to use is popularity, which can be a strong indicator for quality. There were plenty of other diabetes apps. Moreover, mySugr's marketing budget was rather small (they raised €6M in total), so how could they achieve such impressive growth metrics? The simple reason: they had a great product. With nearly a third of the mySugr team living with diabetes, they understood their users better than anyone and created a product that worked for them. Getting users on board opened the doors for partnerships and thereby made the product even more valuable. It sounds like an easy out and a simple answer, but it should not surprise anyone that in the world of start-ups, the best product often wins (it is actually quite reassuring).

02 // Problem-Solution Fit: A problem that's solvable. Diabetes was the right indication for chronic condition management. It worked as a great early case for a new digital health-driven disease management paradigm—helping patients in a quite consumerized setting with a real pain in their daily lives.

The mySugr diabetes logbook was successful, while a lot of chronic diseases management tools fail or struggle. Why? Diabetics are used to manage their condition themselves, multiple times per day, every day. While the process might be cumbersome, it is rather straightforward. This is especially so when compared to other chronic conditions (e.g. chronic pain, Alzheimer's, dementia, depression, migraine) that require far more individually nuanced treatment plans, higher involvement of HCPs, unclear data points, and a spectrum of triggers. In the end, diabetes management is a process that can be illustrated in a "binary-way", (read: perfect for software-way).

03 // A solution whose impact is measurable with industry standard frameworks. The tangible value of the app, shown in clinical studies, was crucial for mySugr's success.

Moving away from a patient-paid freemium B2C model, clinical data showing positive outcomes is a key criterion for monetizing in healthcare. Years before discussions began about "DiGA" (German reimbursement system for digital applications), mySugr presented clinical data to prove the benefits of their app. This opened the doors for partnerships with insurers and lead to recurring and much higher revenues via prescriptions and reimbursement contracts.

04 // Preparing for growth and internationalization into key markets—venturing beyond Europe.

Entry into the US-market was a critical factor in mySugr's success. Digital health solutions are often unique to the specific healthcare system in which they are embedded. This is different in MedTech and BioTech, where a drug may have different prices and regulatory pathways, but in the end will work the same way in New York as in Potsdam. Taking lessons from MedTech and BioTech incumbents, the way to make money with a product is by entering the US-market. Having a footprint there tremendously increased mySugr's attractiveness to potential buyers.

05 // Finding the right corporate champions for collaboration was crucial in mySugr's success: It's about Win-Win and shared vision, not David versus Goliath.

With Roche, mySugr found a company with a shared vision that had the willingness and need to evolve their business model. However, even before the acquisition, early champions were important to gain traction and deliver a meaningful proof of concept. In the end, mySugr partnered with MedTech, Diagnostics companies and with insurers. Their collaboration was a win-win situation that changed the standard of care at scale. We often talk about disruption, but digital health's impact on the treatment system is less about disruption and more about expansion.

06 // Getting the timing of the deal right—with sufficient traction and need to quickly (hyper) scale.

The project began in the early days of digital health, complimented with good timing for the exit for mySugr as they had proven traction in Germany and the US, even though (US) competitors had significantly more venture capital available of scaling their solutions. Additionally, the timing was also right for Roche who were in danger of being commoditized with their existing range of glucose meters and test strips.

07 // Focusing on the best team & keeping them onboard after the acquisition.

The mySugr team was diverse, but also had first-hand experience in dealing with the condition, enabling a highly focused, patient-centric approach (convenience, convenience, convenience!). At the time, one-third of the staff was living with diabetes. From Roche's perspective, it was also crucial that the founding team was committed to continue the mySugr journey within the corporate. They were equipped with a high degree of independence and received every necessary support from the pharma giant. Indeed, the founding members led mySugr for years after the acquisition—Frank Westermann remained CEO until end of 2019, while Michael Forisch is a member of the mySugr leadership team until today.

08 // Investment in bringing cultures together pays off.

The combination of start-up and corporate culture is always a challenge. Roche and mySugr have shown how both sides can benefit from each other. Post-acquisition, the start-up brought in a radical focus on patient value, agile ways of operating and new working forms and spaces. Roche, on the other hand, brought years of regulatory and market access experience, a critical factor needed to succeed in the MedTech environment. Roche took its time in bringing the cultures together, retaining a lot of talent at mySugr and at the same time inspiring many of its own employees through exchange and collaboration with the mySugr team.

Outlook:

What is next in digital healthcare?

We set out to retell mySugr's story and identify its success criteria. By doing so, we hope to have provided a unique insight into Europe's digital health landscape. The mySugr case and its strategic acquisition demonstrated how corporates and start-ups can benefit from each other's strengths. It also proved that digital health companies with a global footprint can start in Europe.

We didn't promise a blueprint, which is good, because we didn't deliver one. Lots of mySugr's success criteria may not apply to you, your business, or the challenges you are facing. As initially quoted "all happy companies are different". Still, mySugr's laser-focus on a great customer experience and a product that serves its users is a good place to start, especially in healthcare. Patients are demanding more convenience, more transparency, lower prices, and more personalization. This is a tall order for a system with a reputation for patronizing patients. Within this ecosystem, mySugr distinguished itself as one of the first companies capable of retaining a consumer-focused approach. Thus, an acquisition by incumbents can be strategically beneficial to transfer knowledge to catch-up with an irreversible trend: "Consumerization".

MySugr is a great example that software eating healthcare is more of a false narrative—actually, software is expanding and improving healthcare. The future is about collaboration, not disruption. Incumbents can profit the most and should therefore boost their efforts to work and collaborate with start-ups—not via start-up initiatives but across all business units.

Europe's digital health ecosystem is maturing. It's not just first-time founders anymore. Experienced digital health entrepreneurs take their learnings and continue rethinking our healthcare system with digital solutions. Case in point: Two of mySugr's founders are back in the digital health world with new ventures. Frank Westermann just recently closed a $3.7M financing round with 9am.health[7], a virtual diabetes clinic, and Fredrik Debong launched hi.health, a digital expense account for privately insured patients.[8]

Pushed by Covid-19, the consumerization of healthcare is more relevant today than ever. With the halt of in-person services, healthcare stakeholders are in the process of adopting strategies that are both patient- and customer-centric. With trust being an essential component of any patient/provider relationship, the importance of corporate incumbents' brand names are crucial for the utilization of new digital healthcare services when attempting to scale a new startup product.

Appendix

Sources

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(02) *Peter Thiel / Zero to One Quelle: Thiel, Peter with Masters, Blake (2014)*

(03) *https://www.mysugr.com/en-us/about-us/*

(04) *https://www.appannie.com/de/*

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(06) *As of March 2021 Roche has signed a partnership with French AI company Diabeloop to move towards a hybrid closed-loop system integrating continuous glucose monitoring, an insulin pump and a glucose detecting algorithm.*

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