



Green PropTech: opening the door to greater sustainability

Swiss PropTech Report

2023

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Publisher: Credit Suisse AG, Investment Solutions & Sustainability

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Editorial deadline

June 9, 2023

Publication series

Swiss Issues Immobilien

Visit our website

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Contributions

Roman Bolliger, Swiss Circle Lars Sommerer, SwissPropTech Dear readers,

Sustainability is becoming an increasingly important goal for an ever larger section of our society. It has also sparked reactions in the political domain, prompting Switzerland to set the target of cutting greenhouse gas emissions to net zero by 2050. The aim of achieving a carbon-neutral building stock by 2050 poses significant challenges for Switzerland's real estate sector given its properties' long life span. New and innovative ideas are crucial to meet the challenge of reaching net-zero emissions. PropTechs, which tend to be young and innovative firms, have the potential to introduce new ideas and products to facilitate a swifter transformation of Switzerland's property market. Accordingly, this sixth edition of our PropTech study has a firm focus on sustainability.

As this year's report demonstrates, PropTechs already offer a wealth of products that support sustainability goals in the real estate sector. In the current setting, the clear priority is on the "E" of ESG. The broad product offering in the environmental category includes software and platform solutions to support sustainability, artificial intelligence (AI) tools, the production of sustainable components such as IoT devices, and sustainable services. While the "E" is currently in the spotlight, PropTechs are already focusing on the "S". What we are mainly seeing in the social category are solutions relating to a sharing economy and alternative living concepts. By contrast, the potential for technological solutions to the problem of the financial burden of the recent sharp rise in housing costs is likely to be smaller.

In addition to this featured topic, our latest study performs a health check on the Swiss PropTech sector. Despite greater uncertainty stemming from higher inflation, elevated interest rates and a flagging economy, Switzerland's PropTechs are developing robustly. Last year saw the majority of firms reporting appreciable growth in revenues and employment. Meanwhile, the sector's expectations for 2023 are even more upbeat.

That said, the PropTech sector is not without its challenges, though many relate to the ambitious growth plans of individual firms. More than one-third of the businesses in our survey are having difficulties recruiting staff. PropTechs are therefore not immune to the widespread shortage of skilled labour in Switzerland. A further challenge for start-ups is having to compete with wellfunded large corporations in attracting the best talent. This can curb their ability to grow and to innovate.

We would like to take this opportunity to thank all those who took part in the 2023 PropTech Survey for their contribution, without which it would not have been possible to bring more transparency into a market that will change the world of property on an enduring basis.

We hope you find this publication an inspiring read.

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Changing market environment offers opportunities for PropTechs

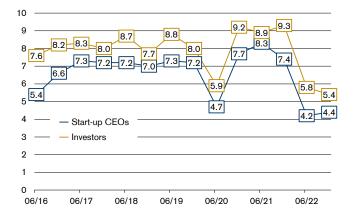
Despite various uncertainties, PropTechs are still posting strong growth in employment and revenues. However, sentiment is highly subdued at the global level. In Switzerland, the sector's main concerns at present are the shortage of skilled labour and the green transformation of the country's building stock.

PropTechs face headwinds of monetary tightening The Swiss real estate market and, by association, the PropTech landscape have been hit by the interest rate reversal over the past year. Higher interest rates mean increased costs for tenants and owners and have reduced the attractiveness of real estate investments. In short, the prolonged upswing has come to an end for the time being. Nonetheless, Switzerland has held up relatively well in this changing market environment and the property market remains on course for a soft landing. The current process of normalisation creates an opportunity for Swiss PropTechs as the new reality we now inhabit is likely to be less permissive of the inefficient management, vacant properties and preservation of the status quo that were indulged in the preceding property boom. In this setting, innovative PropTechs can help to boost efficiency and achieve better results in the planning, construction, administration, renovation or demolition of a property.

Muted expectations among investors and CEOs of start-ups

Continued macroeconomic uncertainty relating to inflation, rising key rates and the war in Ukraine triggered a veritable collapse of confidence among investors and the CEOs of start-ups around the world in the first two quarters of 2022. Figure 1 shows the decline in the Global PropTech Confidence Index, which is published semi-annually by MetaProp. While the index stabilised in the second half of the year, it remained at a record low. Subdued confidence among investors in particular can make some start-ups feel uneasy. In Switzerland, these concerns are somewhat tempered by the volume of investments in Swiss start-ups in 2022, which came in at CHF 3.969 billion, an increase of 29.7% on the 2021 level¹.

Fig. 1: Confidence at a record low among investors and CEOs Global PropTech Confidence Index; values of more than 5 signal confidence

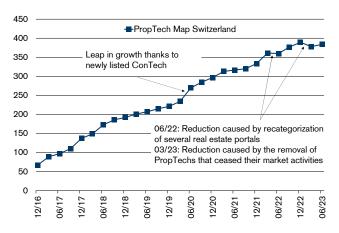


Source: MetaProp, Credit Suisse

Last data point: 12/2022

Fig. 2: Continued growth in the PropTech sector

Number of PropTechs according to the PropTech Map Switzerland



Source: proptechnews.ch, Credit Suisse

Last data point: 05/2023

PropTech landscape still expanding

Nonetheless, the dip in confidence has had repercussions on start-up activity. As Figure 2 shows, the preceding years' trend has flattened. While 24 new PropTechs have been established since June 2022, taking the total number to 384, this equates to a decline of 40% compared to the prior-year period (June 2021 - June 2022: +40 PropTechs). It is worth noting that an adjustment to the PropTech Map for Switzerland in February 2023 revealed a fall in the number of PropTechs from 400 to 378. It is no longer possible to verify when these former companies ceased trading. The growth rate was particularly high in the categories of construction (+38.7%) and software/ERP/CRM (+20.0%), while the categories of smart building/loT (+12.9%), sale (+12.5%) and services (+8.4%) posted moderate growth. There were no changes in the asset management, finance and blockchain categories. Declines were recorded in the categories of floor plans AR/VR (-6.5%), marketplace (-6.1%) and rental (-3.6%).

PropTech Survey 2023

This year's survey was sent to 420 companies that are assigned to the PropTech sector. The results of the survey are based on the answers from 58 companies, which corresponds to a response rate of 14%. As the survey is anonymous, the structure of the sample may differ from that of previous surveys. It is therefore not possible to make direct comparisons with prior-year data. However, the results provide valuable indications of general trends within the sector. For this reason, readings from this year's study are compared with the results of previous studies wherever we consider it appropriate.

Solid results achieved in 2022 despite uncertainty...

Although expectations are subdued at the global level, Swiss PropTechs still seem optimistic about the future. None of the companies in the survey indicated plans to cut staff numbers. 61% of PropTechs expanded their workforce last year, by 59% on average (Fig. 3). However, 11% stated that they reduced the number of employees on their payroll in 2022. A comparison of the companies' expectations last year with the actual employee figures reveals that the number of staff rose more significantly than anticipated. At the same time, it is important to reiterate that the samples vary from year to year. Meanwhile, high expectations in terms of revenue growth were not entirely met, although average revenue growth was still impressive at 89%.

...and expectations for 2023 are even more upbeat

One reason for the discrepancy between global sentiment and the expectations of PropTechs operating in Switzerland may be related to the above-mentioned soft landing in the Swiss property market. Moreover, uncertainty surrounding energy shortages, inflation and the economic trend has diminished since last year. This is reflected by the PropTechs' expectations going forward, with growth in revenues and employment in 2023 projected at 119% and 67%, respectively. To some extent, these optimistic expectations are also evident in the responses on the main challenges facing PropTechs.

Fig. 3: Expected and actual growth in employment and revenues (averages)

Questions regarding past and expected trend in employment and revenues

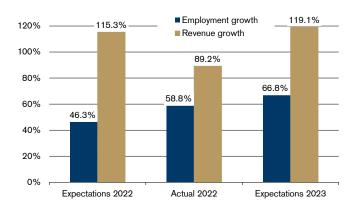
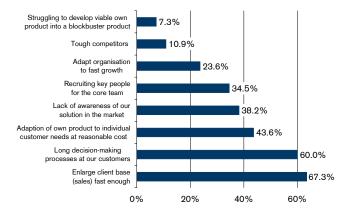


Fig. 4: Challenges for PropTechs

"What are the biggest challenges that your PropTech is currently facing?"



Source: Credit Suisse PropTech survey 2023 (N = 56)

Source: Credit Suisse PropTech survey 2023 (N = 56)

The challenges cited most frequently by PropTechs were difficulties achieving rapid growth in the customer base, together with lengthy decision-making on the part of customers (Fig. 4). This shows that client acquisition and management are current sticking points for many PropTechs, which see further growth potential in these areas.

Focus on sustainability and deficit of specialist staff The skilled labour required to achieve this growth is unfortunately not adequately available on the Swiss labour market. The shortage of specialist staff and economic uncertainties will persist in the short to medium term and remain a concern for both PropTechs and the Swiss economy as a whole. However, the long-term aim of achieving net-zero emissions in Switzerland's building stock is not in any real doubt. The targets for Switzerland's building stock are a 50% reduction in emissions by 2030 versus the 1990 level and carbon neutrality by 2050. Innovative PropTechs can help to meet these goals. With this in mind, we posed several questions on the shortage of skilled labour and the issue of sustainability in this year's survey.

Shortage of specialist staff as the biggest challenge

Unfilled vacancies due to the current shortage of specialist staff lead to challenges in growing as a business and hamper firms' ability to innovate. Furthermore, small businesses and start-ups are up against large corporations with deep pockets in competing for the best talent.

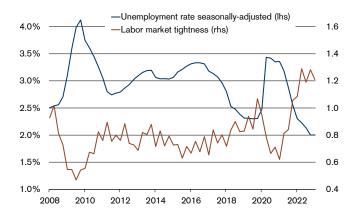
Record-low unemployment and many vacant positions Low unemployment figures are good news in principle, but they can also have undesirable side-effects such as a shortage of specialist staff. After the Covid-19 pandemic briefly put the brakes on the economy and, simultaneously, the labour market, since then unemployment figures have plunged dramatically and currently come in at an average of 2.0%. At the same time, in many locations firms are seeking to recruit large numbers of staff. In conjunction with a record-low unemployment rate, this has created a situation in which the ratio of job vacancies to unemployed workers has risen above 1 over a period of several quarters for the first time since 2008 (Fig. 5). This means that there are currently more vacancies than unemployed people to fill them – 1.2 posts per unemployed worker. The need for specialists is especially acute in healthcare professions, IT, engineering technology and numerous segments of the construction and manufacturing industries.

Three megatrends impacting on the shortage of specialist staff

The lack of qualified staff is being influenced by three megatrends: an ageing demographic, digitalisation and the growing flexibility in working models. With baby boomers retiring and a birth rate that has been low for years, those leaving the labour market are already outnumbering those entering the world of work in 2023. While this trend can be mitigated via immigration, it cannot be offset completely. In contrast to this, technological change is often associated with job losses. Once again, this is stoking the debate about the implications of digitalisation amidst the introduction of the latest generation of artificial intelligence (Al) tools. However, the long-term effect is a moot point as technological developments such as this will also create new job profiles, while establishing and maintaining the necessary infrastructure will create new jobs. In turn, this will require specialist staff. The shortage of qualified labour is also being influenced by the desire for flexible working models. Staff from younger generations have higher expectations when it comes to their working conditions. For example, working from home, part-time working and flexible hours are increasingly viewed as the norm. This creates fresh challenges for businesses, while at the same time more staff are needed to fill a full-time vacancy.

Fig. 5: Record-low unemployment rate

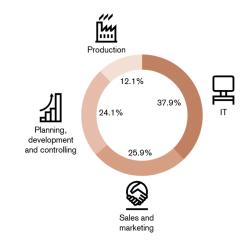
Unemployment rate in % shown on the left-hand scale; ratio of vacancies to unemployed people shown on the right-hand scale



Source: Credit Suisse, FSO, Jobradar

Last data point: Q1/2023

Fig. 6: Fields in which PropTechs are having difficulty recruiting "Specify up to three jobs/skills for which you are currently finding it difficult to re-



Source: Credit Suisse PropTech survey 2023 (N = 23)

Strongest demand for IT specialists

Many PropTechs require well qualified staff from the IT and technology sectors. To achieve their ambitious growth targets, PropTechs also need sales and marketing personnel. This is also evident based on the challenges mentioned (Fig. 4). In our survey, more than half of PropTechs stated that they are currently finding the recruitment process difficult. 38% of the qualified staff PropTechs are seeking to recruit specialise in IT (Fig. 6), with software developers, data scientists and UI/UX designers in especially high demand (Fig. 7). But there is also strong demand for sales and marketing personnel, with 25.9% of the skills being sought falling under this category. As successful start-ups frequently follow a steep growth curve, these firms are often looking for staff in the fields of business development and product/project management. Furthermore, many PropTechs in IoT (internet of things) and construction require specialists with practical training. There is particular demand for specialists in building technology in relation to smart buildings, as well as for electricians.

High salary demands as a hurdle to recruitment

In our survey, we asked companies for their opinion on various factors with an influence on recruitment (Fig. 8). When it comes to the shortage of qualified staff, one of the general difficulties PropTechs face is that they receive too few applications from candidates with sufficient skills. This comes as little surprise in an environment in which there are more vacancies than jobseekers. Indeed, it underlines the main problem facing many smaller companies. What is more interesting is that many PropTechs described high salary demands as an even bigger obstacle. In Universum's Most Attractive Employers ranking, which is based on a survey of Swiss students, the first 50 places exclusively comprise large corporations and state-owned companies. This is partly due to their being well-known, but also a reflection of their financial wherewithal. Large companies can often pay more and offer attractive benefits, as well as higher pension fund and insurance contributions.

Differences in the nature of staff shortages

Credit Suisse's SME Study 2022 also showed that many SMEs cannot meet the desire for flexible working models in full. However, for PropTechs this only seems to be a second-order issue. For companies from the field of software/CRM/ERP/data management in particular, the requirements on working conditions are hardly an obstacle at all. In contrast, salary demands prove to be all the more challenging. The combination of high salary demands and lower visibility on the labour market is therefore the biggest issue for PropTechs. For small and medium-sized enterprises, the category to which start-ups belong, it is correspondingly difficult to be successful in the battle for the most highly qualified talent against globally operating large corporations. In our survey, firms from the asset management, finance and marketplace/platform segments in particular flagged up difficulties recruiting new staff (Fig. 28). Owing to the small number of survey participants in the asset management and finance categories, we would advise against ascribing too much importance to these results.

Fig. 7: Top five most in-demand skills

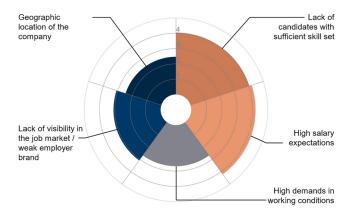
"Specify up to three jobs/skills for which you are currently finding it difficult to recruit."

1	围	Software engineering / development		
2		Sales		
3	묘	Data Science, analytics, AI/ML		
4	겚	Business development		
5	[hy	Building automatization technology		

Source: Credit Suisse PropTech survey 2023 (N = 23)

Fig. 8: Reasons for recruitment difficulties

"How would you describe the influence of the following factors on your recruitment?" Scale: 1 = not important, 5 = highly important



Source: Credit Suisse PropTech survey 2023 (N = 27)

PropTechs offer path to greater sustainability

The Swiss real estate market has a long way to go until it achieves net zero emissions. What do PropTechs contribute to the green transformation process? Our survey this year highlights how Swiss PropTechs approach the issue of sustainability, what drives them and the biggest obstacles they face in doing so.

Framework for the sustainable future of building stock

Despite the failed attempt to conduct a full revision of Switzerland's CO_2 Act, which would have included a swifter reduction in building-related emissions, it seems that the only way forward for the real estate sector is a climate-neutral future. The Swiss federal government's climate strategy has set the target of cutting greenhouse gas emissions to net zero by 2050 and defined a 50% reduction in emissions by 2030 from the 1990 level as an initial milestone for the existing building stock. This was reiterated by the Swiss Federal Council in its statement on the revised CO_2 Act on 16 September 2022. Subsidies from the proceeds of the CO_2 levy will form part of the funding to realise these goals. Potential beneficiaries include companies that offer innovative technologies and have a strong awareness of the links between environmental and social impacts in the real estate ecosystem.

Significant growth in sustainable investments

Subsidies for renewable energy and technologies that reduce greenhouse gas emissions in buildings are not the only possible incentives for sustainable PropTechs. Investor demand for companies that offer green solutions is another important driver, as around one-third of finance for PropTech expansion is derived from strategic investors or venture capital. The trend towards sustainable investing is reflected by the level of growth in funds promoted as sustainable in Switzerland: a total of 1,858 ESG (environmental, social, governance) funds worth an overall volume of some CHF 956 billion were on offer in Switzerland in 2022, representing an increase of CHF 181 billion since 2021 (Fig. 9). Investment capital in Swiss start-ups has exhibited similar levels of growth. The Swiss Startup Radar 2022/2023 shows that the volume of funds channelled into sustainable start-ups in 2021 was 2.94 times the level of 2019. Growth in sustainable start-up investments exceeded the average growth factor for all start-ups combined (2.34) and amounted to some CHF 600 million in 2021.

Fig. 9: Growth in ESG funds

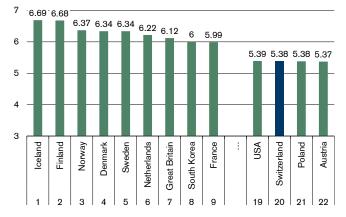
Left axis: volume of ESG funds in CHF billion Right axis: number of ESG funds



Source: HSLU Last data point: 30/06/2022

Fig. 10: Switzerland in the Green Future Index 2023

The Green Future Index compares the performance of individual countries in the categories of carbon emissions, energy transition, green society, clean innovation and climate policy.



Source: MIT Technology Review

Upside potential in sustainability

The growth in sustainable start-up investments and the concomitant boom in start-ups since 2019 are highly important to Switzerland's green transformation and its status as a business location. While start-ups generally perform better than the overall economy in terms of sustainability, Switzerland ranks only 20th among 76 countries in the Green Future Index for 2023 (Fig. 10). One of the factors that would improve its performance are innovative companies that are willing to exceed the applicable minimum requirements and play a pioneering role in sustainability.

Definition of a sustainable company

PropTechs were asked about the issue of sustainability in this year's survey. The aim was to find out what drives them to be more sustainable, what difficulties they face, how they rate themselves and their competitors in terms of sustainability and how they perceive their price competitiveness. We use the following definition to classify PropTechs as sustainable:

Definition of a sustainable PropTech for the purpose of the survey

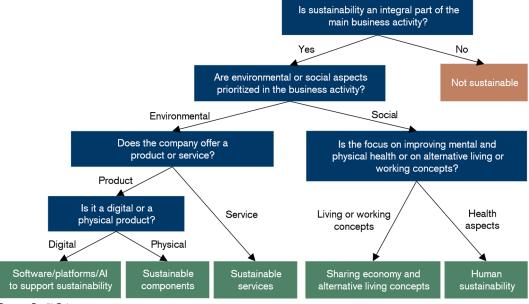
We define PropTechs as sustainable if environmental, social and governance factors are enshrined in their business models. In particular, reducing the negative impacts of buildings on people and the environment throughout the buildings' life cycle has to be an integral part of their business activities. Examples of sustainable activities include the optimisation of energy and/or water consumption, the use of renewable energy, the development and use of sustainable building materials, the creation of green areas and the improvement of working or living conditions to enhance physical and mental health.

Categories of sustainable PropTechs

A decision tree was created for two purposes: to classify the PropTechs as sustainable or not sustainable and to formalise the various areas of activity as far as possible (Fig. 11). We classified 76 of the 420 PropTechs in our selection as sustainable ("green PropTech"), which constitutes a rate of 18%. According to the Swiss Startup Radar for 2020/2021, the total number of start-ups that are up to 10 years old is estimated to be around 4,000, while sustainable start-ups amount to some 600, which is a share of approximately 15%. Our market analysis can be assumed to be plausible on the basis of this benchmark.

Fig. 11: Categories of sustainable PropTechs

Activities of green PropTechs can be broken down into two priority areas: environmental or social. These are then subdivided further into three and two areas of activity, respectively.



Source: Credit Suisse

Fig. 12: Overview of market solutions from sustainable PropTechs

	Software/platforms/Al to support sustainability	Sustainable components	Sustainable services	Sharing economy and alternative living concepts	Human sustainability
•	Data-based dashboards for monitoring and optimising energy and water consumption, monitoring air quality etc.	Manufacturing of innovative and sustainable building materials, furniture etc.	Advisory services with a focus on sustainable building Finance and investment in	 Office partnerships to share resources Temporary use offerings to re- 	Applications to enhance working conditions Greening office space, office
•	AR/VR software for efficient and resource-saving spatial planning and building design	Manufacturing of loT devices Manufacturing of water and air filtration systems, energy re- covery systems etc.	sustainable real estate portfo- lios Waste and recycling manage- ment	 Development of social living/neighbourhood design concepts 	design to improve mental well- being
•	Sales platforms for sustainable products (solar, battery solutions etc.)	Robotic systems for construc- tion to reduce construction waste		·	

Classification of sustainable PropTechs by area of activity

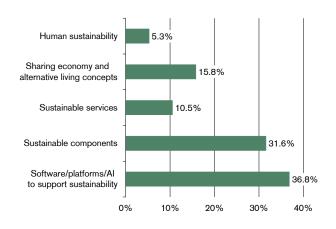
The 76 "green PropTechs" were then allocated to one of five areas of activity (Fig.11: green). Nonetheless, some of these areas overlap as a company that sells both IoT sensor technology and the related software, for example, could be allocated to several categories. In such cases, we classified the companies according to the following rule: if the physical goods are marketed as the main products, the company was allocated to the "sustainable components" category. Otherwise, it was assigned to the "software/platforms/AI to support sustainability" category. Figure 13 shows the breakdown of sustainable PropTechs by areas of activity.

Sustainable market solutions of PropTechs

The table above (Fig. 12) provides an overview of the innovative and sustainable products and services offered by sustainable PropTechs. The list is not exhaustive. Solutions are required at every stage of a property's life cycle to make the building stock more sustainable. Some PropTechs focus on enhancing the efficiency of the **planning and development process** by devising sustainable building concepts or offering visual tools. **Finance** is a basic prerequisite for the design and construction of a property. Several PropTechs therefore offer options to invest in sustainable real estate portfolios or individual properties. PropTechs involved in the **building phase**, for example, manufacture sustainable building materials (e.g. derived from mineral waste) or offer industrial 3D printing and robotic systems to reduce construction and resource wastage. As the breakdown of PropTechs shows, the product range largely comprises solutions for the installation and operation of devices for smart buildings. These solutions are used for the data-supported optimisation of various aspects of consumption during the property's **operational phase**.

Fig. 13: Breakdown of PropTechs by area of activity

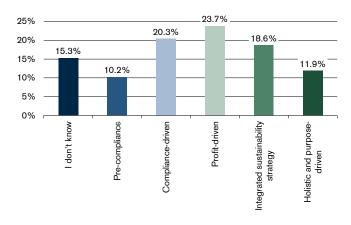
Breakdown in $\,\%$



Source: Credit Suisse

Fig. 14: Breakdown of PropTechs into the five phases of business sustainability

"Which phase of business sustainability currently applies to your PropTech?" Companies in the profit-driven phase or later see a commercial advantage to offering sustainable products. This classifies a PropTech as sustainable.



Source: Credit Suisse PropTech survey 2023 (N = 57)

In addition, some companies have unusual product offerings with a stronger focus on social sustainability, such as greening design concepts for open-plan offices with smart controls or spatial/interior design concepts that are suitable for working environments. During the **decommissioning** of a property, some PropTechs offer recycling services for the reuse of building materials.

PropTechs' selfassessment

To check the proportion of sustainable PropTechs in our sample, the first part of the survey comprised a self-assessment on the companies' sustainability. The analysis of the survey shows that 54% consider themselves providers of sustainable products. Even in the narrower definition that would only classify PropTechs in phases 4 and 5 as "green PropTechs", the share of more than 30% would be significantly higher than the percentage produced by our market analysis (Fig. 14) There are different explanations for this. Firstly, it may be due to self-selection bias, with many companies that do not offer sustainable products choosing not to participate in or finish the survey. Secondly, there may also be a tendency for companies to rate themselves more highly than others. There is an indication of this in Figure 15, which shows that 98% of the respondents considered themselves either equally (43%) or more (55%) sustainable than their competitors.

Difficult to measure sustainability

In general, it is positive to note that so many companies seem to be making an effort to implement product ranges and strategies that are wholly sustainable. However, the slightly optimistic self-assessment highlights a problem that is not limited to PropTechs, namely that their assessment of sustainability is subjectively biased. Our survey also shows that the difficulty in measuring sustainability is considered the biggest obstacle by the respondents (Fig. 16). The type of product offering is bound to play a role here, as it is usually easier to determine the sustainability of a physical product than of a purely digital product, such as an online platform. Moreover, as it is rare for small and medium-sized businesses to publish sustainability reports, they find it more difficult to assess their own performance relative to the competition. Better guidelines and more transparency could help to improve this situation.

PropTechs can play a significant role in lowering energy consumption

Better aligned standards and a solid pool of data are also essential prerequisites for reducing emissions in Switzerland's building stock. The first step in this process will be the harmonisation of building labels in early 2024. The cantons have also been instructed to update their data on the types of heating in all buildings as many statistics date back to the 2000 census. PropTechs can provide valuable support in making Switzerland's building stock more sustainable by assisting in calculating emissions and optimising the running of a property. Using sustainable construction materials and smart monitoring systems in new builds is not the only way of reducing consumption, as energy-efficient upgrades to existing properties also offer huge potential. Smart home systems are particularly effective in this regard, as they enable buildings to be upgraded quickly and easily.

Fig. 15: PropTechs' self-assessment

"How would you describe your PropTech's sustainability compared to the competition?"

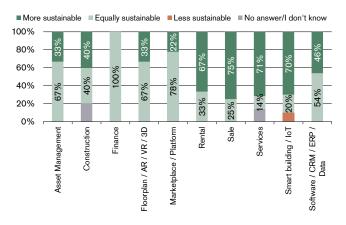
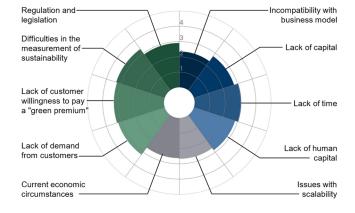


Fig. 16: Obstacles on the path to greater sustainability "Estimate the importance of the following obstacles to sustainability."

"Estimate the importance of the following obstacles to sustainability. Scale: 1 = not important, 5 = highly important



Source: Credit Suisse PropTech survey 2023 (N = 57)

Source: Credit Suisse PropTech survey 2023 (N = 27)

Sustainability is good for (future) business

Many PropTechs that participated in the survey clearly exceed the minimum requirements in terms of their sustainability policies. For most PropTechs, the key reasons for pursuing sustainable business activities relate to commercial aspects such as customer demand on the one hand, while on the other, they feel they have a moral and ethical duty to be sustainable. In this regard, they strive to be role models and ensure that sustainability values are enshrined in their corporate culture

(Fig. 17). Reputation is another important motivation. External pressure, for example due to regulation, legislation or competition within the sector, is less important. Due to their pioneering role in sustainable innovation, green PropTechs are under less pressure to comply with tighter regulation than many long established companies. Thus, PropTechs are important drivers in making properties and the real estate sector as a whole more sustainable. The accelerating movement towards sustainability should help PropTechs to gain market share thanks to their sustainable products. Interest in sustainable investments is also likely to continue growing, which should benefit businesses that are more sustainable by facilitating access to capital. This may prove to be a trump card, especially when the volume of investments in riskier assets is liable to trend lower in an environment of rising interest rates and soft economic growth.

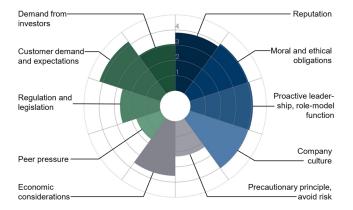
PropTech solutions are often competitively priced

However, the solutions offered have to be competitively priced in order to gain market share. In our survey, we asked PropTechs how they deal with the problem of higher investment costs for sustainable solutions in uncertain economic times. Somewhat contrary to expectations, half of the PropTechs surveyed claimed that the prices of their sustainable solutions were comparable to those of non-sustainable solutions, 17% said their sustainable solutions were cheaper, while only 9% stated that they were more expensive (Fig. 18). One-quarter of the respondents were unable to comment. A closer analysis of the survey participants' activities reveals the reasons for this result. For companies that offer purely digital products such as dashboards, AR/VR software or online platforms, it clearly makes sense not to set higher prices for their solutions, which may even lead to cost savings in the long term. The same applies to pure services. In terms of physical goods such as building materials or completed properties (in the sale/rental categories), a significantly higher number of firms state that their products carry a premium. However, even in these categories, the PropTechs believe that many of their products have comparable prices to those of conventional solutions.

Growth potential thanks to rising commitment to sustainability

PropTechs already offer a broad range of products that support efforts to improve sustainability in the real estate sector. The Swiss property sector still has some way to go before it reaches the target of net-zero emissions. Even the process of determining the current status is still ongoing in many places. It will probably take decades for the renovation of older properties to be completed in Switzerland. Property owners and investors will find it increasingly difficult to avoid this issue in future and will be forced to take action under pressure from society, investors and politicians. As a result, PropTechs still harbour significant growth potential in the years ahead thanks to their sustainable products.

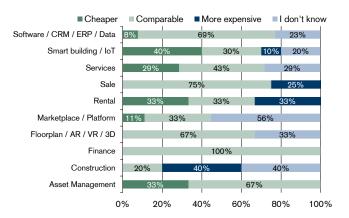
Fig. 17: Drivers of increasing sustainability "Estimate the importance of the following sustainability drivers." Scale: 1 = not important, 5 = highly important



Source: Credit Suisse PropTech survey 2023 (N = 19)

Fig. 18: Price competitiveness of sustainable solutions

"Are your sustainable solutions more expensive, as expensive or cheaper than conventional (non-sustainable) solutions?"



Source: Credit Suisse PropTech survey 2023 (N = 57)

² See Kempf, C. (2022). Construction costs and initial yield effects of MINERGIE certification and sustainable construction measures in new multi-family houses in Switzerland. Journal of Sustainable Real Estate, 15(1), 2180835.

Swiss PropTech Survey 2023 - Three PropTech Portraits

Portrait of three participants in the Swiss PropTech survey 2023

To illustrate the diverse and vibrant PropTech landscape, we give three randomly drawn participants in the PropTech survey the opportunity to introduce themselves.



The innovative solution to identify the costs involved in the construction, operation and life cycle of your property

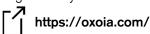
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The new standard in workplace energy optimization

Until now, buildings' energy consumption has only been optimised in isolated instances. On top of this, optimisation measures have only rarely been driven by data. Oxoia is revolutionising this process with a smart, data-driven optimisation solution. This PropTech links up as many systems as possible within buildings such as building automation (e.g. heating, ventilation and air conditioning), IoT devices and external web services, transmitting the data to its own data model. Software then makes use of artificial intelligence (AI) to control the building technology in line with usage, which means that overall energy consumption is kept to a minimum. This solution also reduces the manual operating workload while making the key building technology settings more dynamic.





Harnessing nature for enhanced office air quality

Oxygen at Work is transforming the conventional office experience—a place where we spend a significant part of our daily lives. Based on scientific research and practical experience, Oxygen at Work improves office air quality by incorporating high-performing plants and sensor technology. This approach not only elevates oxygen levels, reduces pollutants, and regulates humidity but also promotes health, productivity, and overall employee well-being. By naturally optimising air quality, Oxygen at Work can help reduce the usage of energy-intensive ventilation systems and mechanical humidifiers, resulting in reduced CO2 emissions. In its endeavours, Oxygen at Work is shaping a future where workplaces enhance both human and environmental health

https://www.oxygenatwork.com/

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