Unlocking the Digital Front Door in Healthcare

A white paper on how to take the digital front door from strategy to execution.

5 Five Faces

Contents

INTRODUCTION

Times have changed and healthcare providers know it. Between the crunch of COVID-19, the changing expectations of consumers, and skilled workforce shortages, digitalisation in healthcare is accepted as essential.

Look at any health provider's digital strategy and patient experience will be high on the agenda. But often the challenge lies not in what to do, but how to do it and where to start.

The hospital and healthcare sector still has a long way to go. In many cases, patients are still being sent physical letters, required to queue for long periods and wait in crowded rooms, complete paper forms, and more.

In this white paper, we will examine the operational, or non-clinical, side of patient experience and explore the concept of a 'digital front door' for health.

"More than 90% of consumers say they'd prefer a single touchpoint to manage their healthcare, compared to only 70% two years ago."

– Bain & Company[1]

Patients want a single touchpoint to coordinate their healthcare needs
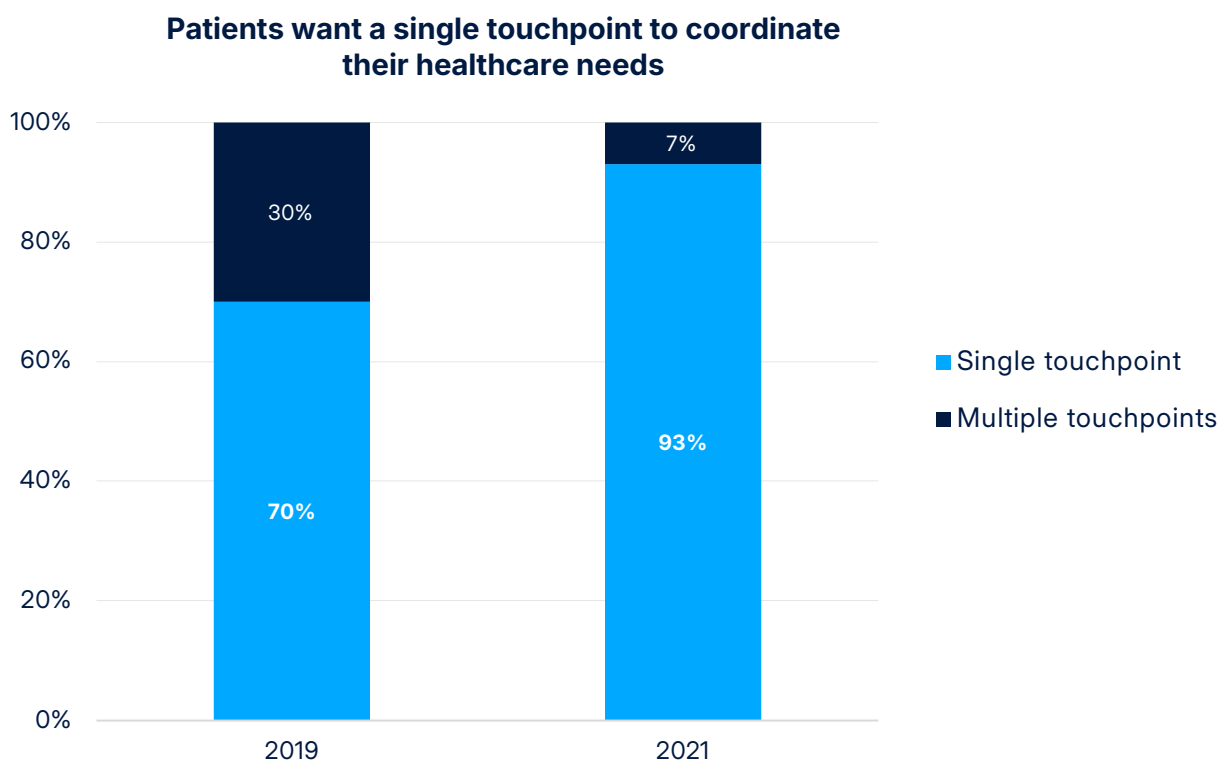
Source: Bain Front Line of Healthcare Asia-Pacific Survey, 2021 (n=1,750), 2019 (n=1,521)

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[1] https://www.bain.com/insights/asia-pacific-front-line-of-healthcare-report-2022/

"For a millennial or a Gen Z the idea of ringing up for an appointment, waiting two weeks, going and sitting in a waiting room for half an hour ... that is not the way they want to access care, even if they are able to."

– Jennifer Doggett, Health Policy Analyst
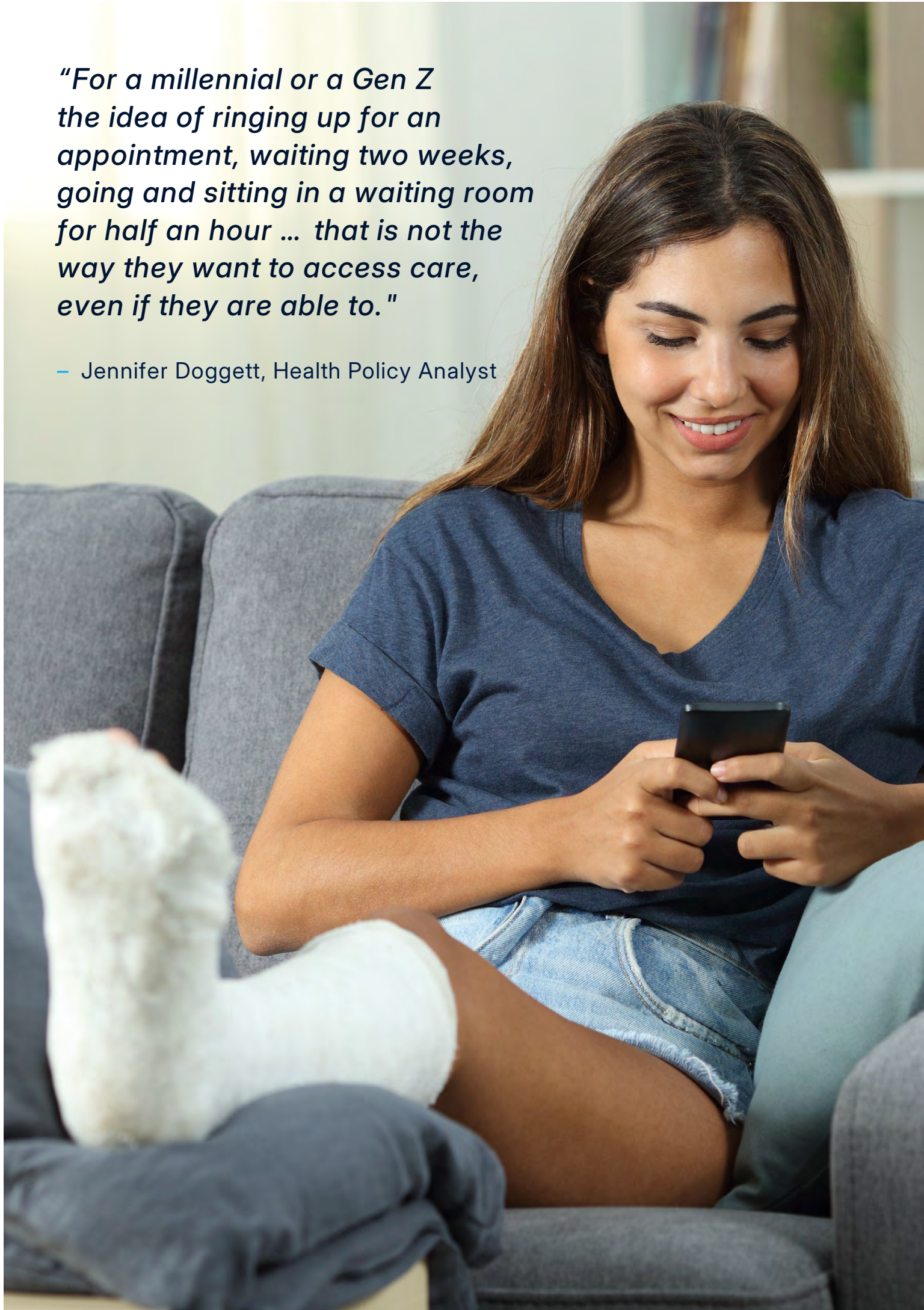
> ## *"COVID-19 was the greatest digitisation test… especially in healthcare."*
> – Steven Van Belleghem[2]

THROUGH PATIENTS' EYES

When a consumer can order a pizza at the tap of an app or choose their seat and check in on their mobile for a flight, they expect the same from all providers, including those in healthcare.

They do not see nor understand the complexity and challenges that healthcare providers face – the complex processes, the disparate silos, and the legacy technology that form roadblocks to seamless digital experiences.

As expectations change, so do frustrations and behaviours.

★☆☆

One-star patient review of a specialist clinic

"One wonders if just making an appointment is so difficult what their more complex operations are like."

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2 https://customerthink.com/how-customer-experience-is-changing-the-healthcare-industry/
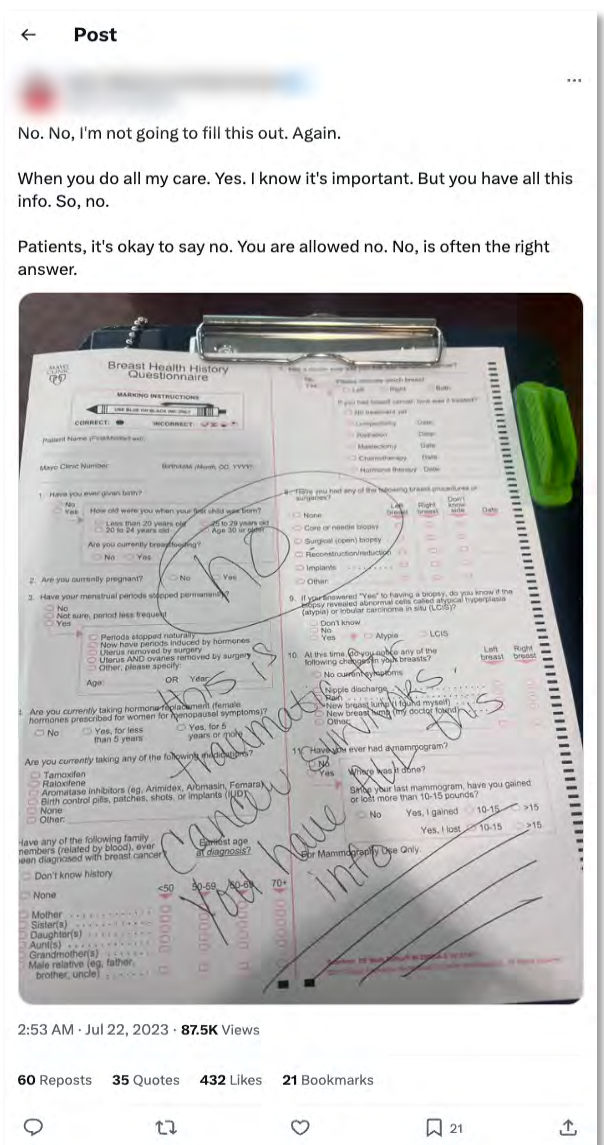
What is the digital front door?

As Kate McDonald states in Pulse+IT, "… the concept [digital front door] has well and truly arrived in Australia and New Zealand."

So, what is it?

We think of it as a digital gateway for patients to access healthcare.

It's about reshaping the patient experience to access healthcare services and resources, embracing modern technology across multiple touchpoints.

According to CIOTech Asia:

> *"The objective is to create a unified, seamless, consumer-centric patient experience that fosters behaviour change while providing better healthcare access, equity, efficiency, quality, outcomes and improved patient and staff satisfaction. The digital front door can also increase brand awareness, reputation, and revenue."*[3]

There's also an emphasis on the initial interactions a patient has with their healthcare service – such confirming or changing an appointment and filling in digital forms.

However, the digital front door can be extended to guide the patient across the whole journey.

It helps to keep this in mind when you're looking at the digital front door – even if you start with the first touchpoints a patient has with your health service, leave room to continue the journey easily to areas like patient feedback and providing follow-up information and resources.

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[3] https://ciotechasia.com/growing-impact-of-the-digital-front-door-on-healthcare/

WHAT DOES THE DIGITAL FRONT DOOR NEED TO DO?

The digital front door is a broad and evolving concept that can span the **entire patient journey** – from finding and arranging care to post-visit follow-up and remote monitoring. It brings together tools like self-scheduling, digital wayfinding, virtual triage, patient education, and more to create a seamless, accessible healthcare experience. **No single vendor can do it all,** which is why integration, interoperability, and a clear understanding of where each solution fits are key.

In this document, we will focus on the areas of the Digital Front Door that Five Faces delivers for the tertiary health sector (hospitals, health districts and large specialist clinics).

Finding and arranging care						
Symptom checker/ virtual triage	Chatbot	Searchable provider directory	Self-scheduling	Streamlined call centre	Digital pre-registration	Reminders, updates and preparation
X	~	X	✔	X	✔	✔

During visit care			
Digital wayfinding	Digital check-in	Digital wait experience and queue management	Digital forms
~	✔	✔	✔

Post-care engagement					
Surveys and feedback	Digital patient education	Follow-up appointments	Remote patient monitoring/ wearables	Patient portal	Secure messaging with clinicians
✔	✔	✔	~	✔	✔

✔ Five Faces capability
~ Five Faces accommodates through integrations

This table is loosely based on the KLAS Capability Matrix, with some minor modifications.

EMMA'S STORY: WHY A CONSISTENT PATIENT EXPERIENCE MATTERS

Emma is 8 and lives in **a rural town** in Australia. She has been diagnosed with **acute lymphoblastic leukemia (ALL)**.

This is the story about how the **digital front door** could make **navigating the health system** easier and more coordinated for Emma's family.

The diagram below shows the different public health services Emma may access. Can you imagine trying to keep track of all the appointments, travel, communication, and advice – while trying to care for a very sick child and keep life going at the same time?

Many patients and carers end up creating their own spreadsheets, carrying around folders full of paper and other ways to keep track of it all.

What a digital front door can do is provide a '**patient hub**' or single-entry point to all the different services provided. This provides one place to see all upcoming (and past) appointments, communicate with service providers, and much more.

Of course, health services don't usually have the resources to install a digital front door across all services, all at once. But having a bigger vision can help in deciding on the approach, architecture and technology to ensure this is ultimately possible.

CONNECTING EMMA'S CARE

CROSSING THE DIGITAL DIVIDE

CATERING TO EVERY PATIENT

One of the biggest pushbacks to digital health solutions is the 'what about older patients' argument. Or it might be low digital literacy or vulnerable groups such as culturally and linguistically diverse (CALD) cohorts.

The digital divide is an important consideration.

You will never force all patients down a digital path. The key is to offer choice and cater to all. Solutions should accommodate a multi-lingual patient interface and meet accessibility requirements as a baseline.

Here's an example of how you could use personas to provide pathways that accommodate different digital preferences:

MOBILE-FIRST

- Preference for digital communication and workflow

HYBRID

- Will use digital communication via a 'push' process, such as being sent links
- Prefers to view and complete information on a laptop or PC.
- May prefer kiosk check-in over mobile-first

ASSISTED

- Requires assistance to check-in and review information due to literacy, language, age, or disability
- May be averse to or suspicious of technology
- Prefers human connection throughout the journey
- Relies on loved ones and needs to grant them profile access

CATER TO THE **NEEDS OF ALL PATIENTS**

**Literacy**

Accessibility

CALD

KEY CAPABILITIES

PATIENT HUB

The patient hub provides a central location for the patient to access everything in one place. Ideally this hub can accommodate the patient's journey across locations, facilities, and models of care, while being accessible and multi-lingual (where required). The patients can see all their appointments, make changes, check-in, communicate with their health provider, and more.

Our approach is to use a secure web interface rather than an app, with a mobile-first and responsive interface.
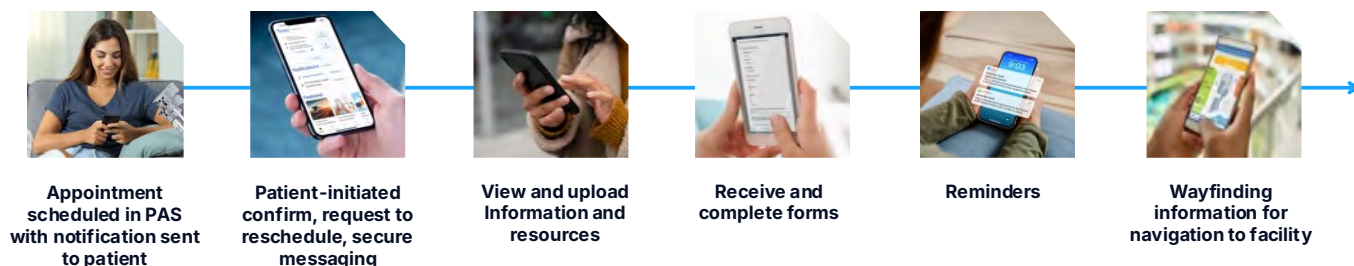
Pre-appointment	Day of appointment	Post-appointment

Pre-appointment

- **Register** for an account
- **View referral information** and notify the health service if you no longer need an appointment
- **View upcoming appointments**/admissions, including date, time, location, etc.
- **Receive important communications** including appointment preparation
- **Make appointments** and/or confirm availability to attend
- **Request to reschedule** if no longer able to attend
- **Access forms**, complete electronically and submit
- **View appointment preparation**
- Receive **personalised education modules** and **health optimisation plans**
- View a **patient timeline**
- Inform the hospital of **changes to demographic** or personal details
- **Upload** requested documents
- **Use secure messaging** to ask questions related to the appointment or procedure
- Receive all communications via the secure **inbox**
- Receive **appointment reminders** via SMS
- View **general news and update banners** from hospital marketing in the patient hub

Day of appointment

- Receive **personalised day of visit instructions**
- **Navigate** to the hospital and clinic location
- **Check-in** via mobile phone, kiosk or assisted by staff
- Use a **patient passport** to check-in
- **Receive updates** via notifications including push notifications

Post-appointment

- View post-appointment **health information**, such as fact sheets or **care plans**
- Receive and complete **surveys**
- View **previous** appointments/admission details
- View **future** appointments
- Make updates in a **patient-controlled diary**
- **Track recovery** progress and **medication adherence**
- Make **pharmacy dispense requests**
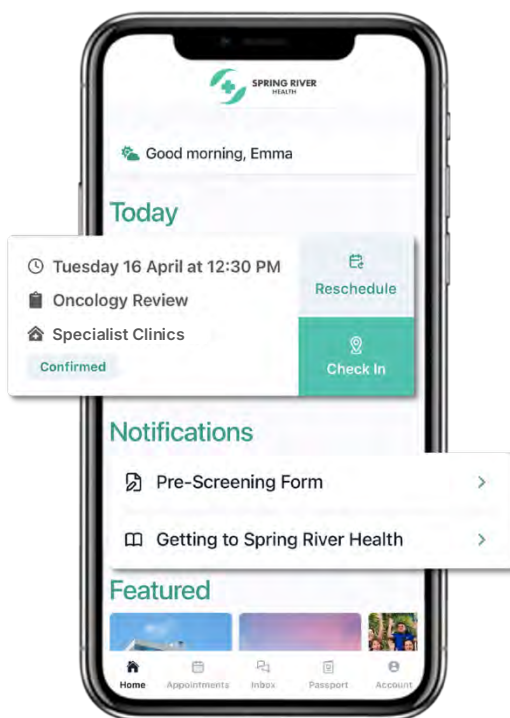
APPOINTMENT MANAGEMENT

A digital front door typically doesn't replace your existing appointment systems (such as PAS, eMR or scheduling solution). What it does is integrate to them and provide an interface that gives patients more control and communication options.

Outpatients

| Appointment scheduled in PAS with notification sent to patient | Patient-initiated confirm, request to reschedule, secure messaging | View and upload Information and resources | Receive and complete forms | Reminders | Wayfinding information for navigation to facility |

Here's an example of a **pre-appointment patient workflow for a specialist outpatient clinic**. It's a mobile-first approach and you may need alternative workflows for hybrid or assisted patients. With complex scheduling requirements, it's still up to the healthcare provider to initiate the appointment date and time – but the patient is notified electronically and can request to reschedule or use secure messaging to contact the clinic.

This workflow is all about getting the patient ready for their appointment and minimising late arrivals and no-shows. You can send the patients resources on how to prepare for the appointment, pre-appointment forms and issue reminders and navigation information.

Staff should have a view of the status of each patient and outliers such as those who haven't confirmed appointments or completed forms. They should gain a view of appointments, times, consult rooms and high-level patient details. They should also have the capability to message (text or email) individual patients and groups of patients – about updates such as delays and wait times.

Below is what a **post-appointment**, mobile-first workflow might look like:

| Information and resources | Feedback and surveys | Notification of follow up appointments |
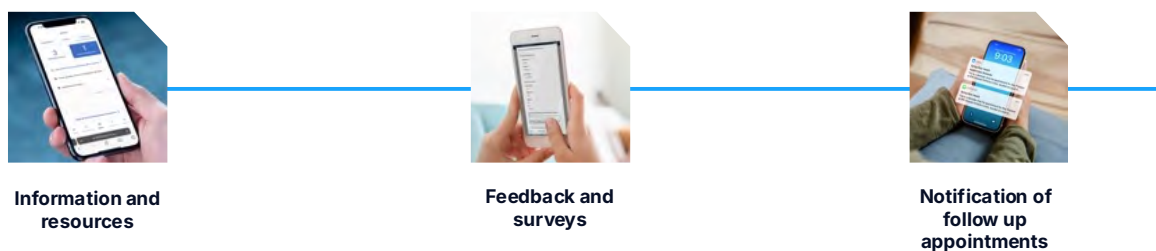
Perioperative Journey Support

Another key use case is the perioperative journey. A digital front door can digitise the paper-based and manual processes around contacting patients, sending tasks and information to prepare for surgery, managing wait lists and sharing information with clinicians and administrators. Additionally, the digital front door can provide a seamless transition for the patient as they move between outpatients and perioperative areas of the health service.

Outpatient appointments → Surgery waitlist: Education, health optimisation and empowerment → Surgery reminders and preparation → Surgery day → Recovery and at-home support → Post-operative outpatient appointments
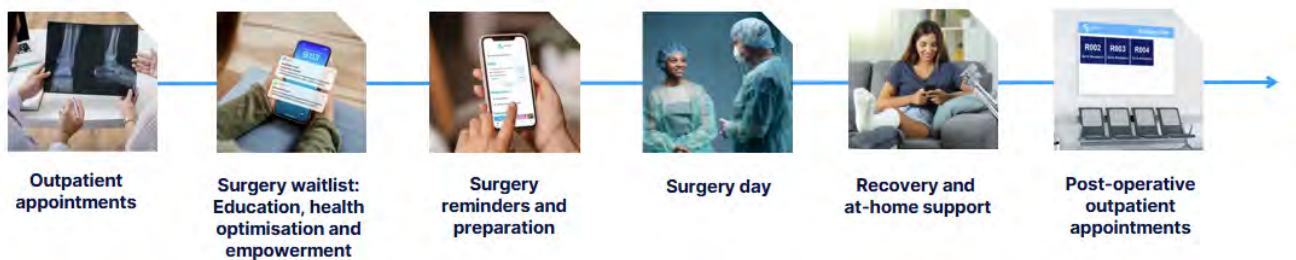
Private Providers

For **private healthcare providers**, the workflows will be different. For example, patients may have the ability to make and change their appointments directly. Some health providers require the digital front door to provide a staff interface to set up appointment scheduling if there is not an adequate scheduling solution already in place. Fee estimates and financial consent are also typically important components of the digital front door. For providers with long patient journeys to accommodate, such as cancer care, there may be additional capabilities required, such as a visual representation of the patient journey/timeline, the ability for patients to keep a diary, and more.

The cost of no-shows

No-shows, Did Not Attend, Fail to Attend… the names are different but the concept is the same.

Patients who don't show up to their appointment.

This is a major cost to healthcare providers and reducing this rate should be a key metric for a digital front door system.

In the United Kingdom, the NHS put some fascinating figures together about no shows for their outpatient clinics. For 2021/22[4]:

95M
Outpatients

7.8M
No-shows (8%)

**A 25% reduction in no-shows would release
almost 2 million appointments, potentially enough to clear the backlog.**

Tip: Studies have shown that simple text reminders have a significant impact on reducing health appointment no-shows[5].

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[4] https://gettingitrightfirsttime.co.uk/wp-content/uploads/2023/04/ClinicallyledSpecialtyOutpatientGuideApr23FINAL-V1-1.pdf
[5] Behavioural insights case study: specialist clinic attendance | vic.gov.au (www.vic.gov.au)

QUEUE MANAGEMENT

The point of queue management is that patients don't have to queue to queue. Sometimes called patient flow or ambulatory care flow, it's about modernising both the queue and wait experience on the day of the patient's visit or appointment.

Check-in

Rather than lining up in a queue to check-in at a counter, a queue management solution typically provides multiple check-in options, including:

- **Mobile check-in** using geofencing can ensure that patients can't check in early unless they're at the location of the appointment
- **Kiosk check-in** via scanning a Patient Passport, QR code scanning or touch screen kiosk. The **patient passport** can be accessed via the patient hub and added to a patient's Apple or Android wallet to provide quick access to their unique QR code for an efficient check-in process
- **Assisted check-in** where patients approach a counter and staff check them in manually via an admin interface


Wait experience

Providers may choose to let patients wait where they want, using **SMS reminders to call patients back** when it's nearly their turn. This reduces crowding in waiting rooms and provides a more pleasant experience for both patients and staff.

Alternatively, waiting rooms can be enhanced with **digital signage that shows both calling displays for the queue** and other messages relevant to that clinic or area of the hospital.

Some health providers choose to provide **estimates of waiting time** to manage expectations and improve transparency and trust.

Patients may be asked to fill in **digital forms** while waiting. These can be integrated with source systems – pre-filled with data the hospital already has and pushing new data directly back to these source systems.
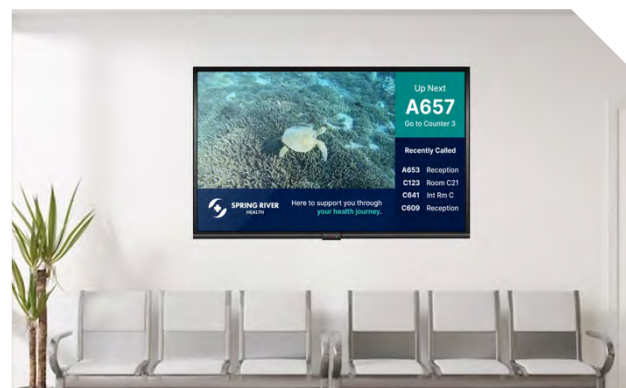
No-shows

Patients who fail to attend appointments can be added to a special 'Did Not Attend' queue, where they are automatically flagged for clinicians and are assigned a different digital outcome form. This typically captures the reason for the DNA, details to reschedule the appointment, or discharge.

Full visibility for staff

Staff gain full visibility of clinic and patient status. Once the patient arrives and checks in, the appointment status changes. For patients with multiple same-day appointments, clinic staff can see where patients are and understand any potential delays to subsequent appointments. Staff also should have the ability to change patient status as they progress through their patient journey, such as being called to a consultation. Queues can be configured for each clinic's requirements, such as limits on number of patients checked-in and waiting, or multi-step journeys such as Fracture Clinic patients attending the Plaster Room, Medical Imaging and a clinical consultation.

Appointment outcome forms can be digitised as part of the process, to improve communication between administrative staff and clinical teams.

Typically, our queue management customers are seeing a reduction in wait times (up to 76%), increases in patient satisfaction, and importantly it has positive impacts on the employee experience.

At Sydney Local Health District, the CIO said:

> *"Our staff are happier… It's a much calmer environment. So, when our patients are coming in, they're not in big lineups that go out the door which just creates anxiety and frustration for our patients and our staff."*

Learn more about Five Faces' Queue Management solution
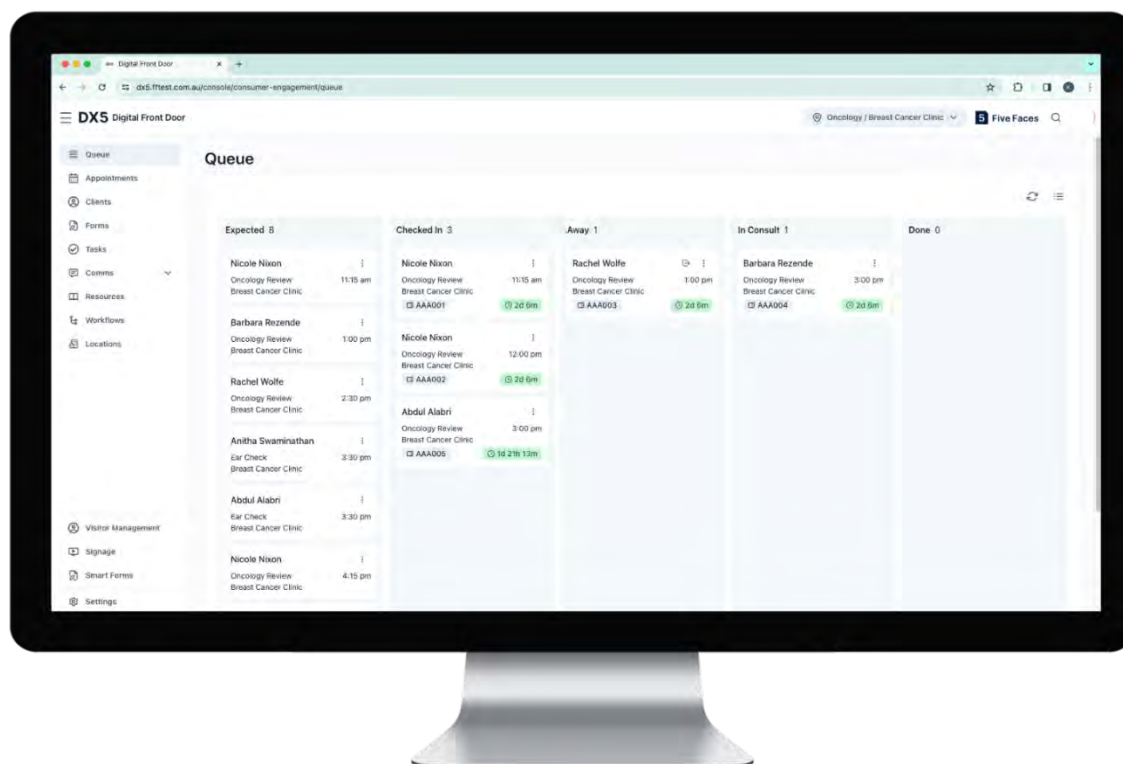
DIGITAL FORMS

Many health providers still use paper forms. There are many reasons for this, but typically it's a question of complexity and resources. A smart forms solution should aim to remove these roadblocks. The key here is that the form builder should enable the health provider to be fully autonomous with *zero* reliance on the vendor or technical resources to create, modify and send forms. The vendor should set up any integrations required and provide training, but beyond that, forms should be self-service. Key capabilities include:

- The ability to **create workflows** so forms can be sent automatically based on the appointment type, specialty, clinician, and location – or manually at staff discretion.

- A **drag-and-drop form creation interface** with a full suite of field types that allow the ability to use forms for different use cases, such as data collection, surveys and more.
- Easy **translation** to support multi-lingual patients and adherence to accessibility standards such as WCAG 2.1AA guidelines.
- **Integration** with source systems to push and pull information where it's needed. Where possible, forms should be pre-populated with information the health service already has.

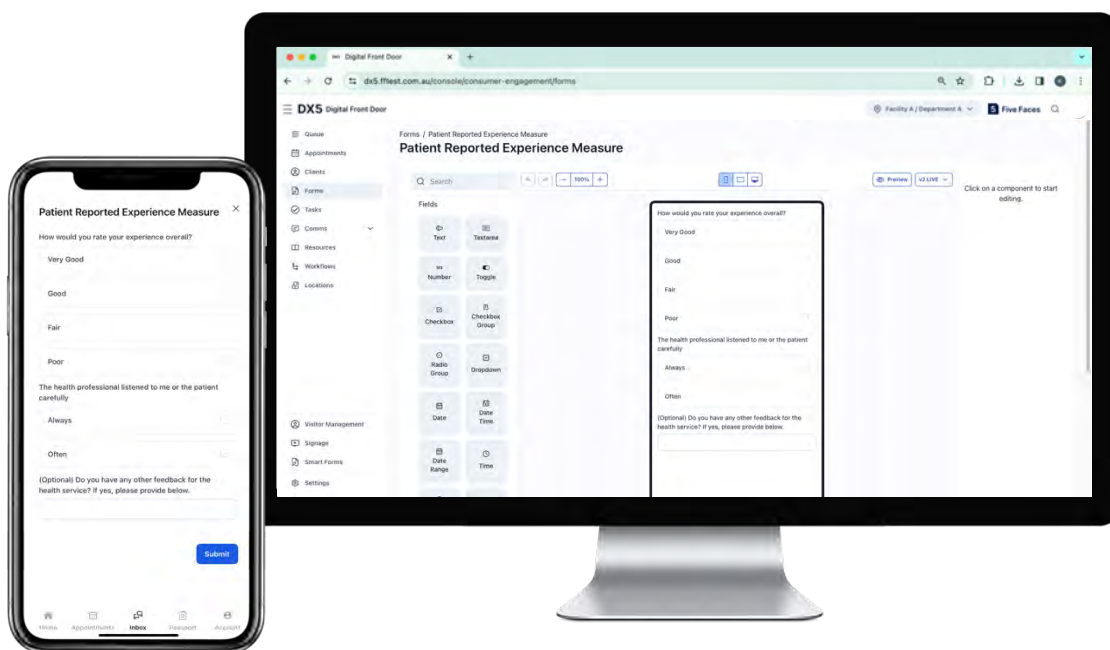Learn more about Five Faces' Smart Forms solution

Create automated workflows

Drag-and-drop form builder

Multi-lingual translation

Integration with source systems

THE DIGITAL HEALTH LEADER'S DILEMMA

> *"We need a digital front door."*

When a digital health leader hears this from a clinic, they will have many thoughts and questions.

- What are the capabilities needed?
- What are the integrations needed?
- How do we ensure patient and information security?
- What about the patients in other clinics and other hospitals? How can we create a solution that can scale?

The health leader might consider several options:

Technology decisions	Pros	Cons
Look to existing enterprise system providers	It's familiar tech, deeply embedded in the organisation	Providers are slow to improve CX and solutions are often unsatisfactory. Limits scalability across the enterprise where different systems are used (such as a different eMR)
Build a custom solution	You're in control	Slow, resource-intensive, and prone to problems when employees move on
Build using a platform	Full control to customise to individual needs; can provide a broad consistent experience with enterprise-grade capabilities	Resource-intensive, high cost of ownership, can be slow to adapt to changes
Use specialist or point solutions	Work with specialist CX providers with deep expertise	You end up stitching together multiple solutions and *still* don't provide a uniform consumer experience. Often limited ability to customise
Configured solution suite	Fast deployment of broad CX capability with most functionality out of the box with the ability to customise. Not reliant on developers or the vendor for ongoing change management	Not as flexible as a platform or custom solution

A QUESTION OF TRADE-OFFS

There is no perfect solution for the CIO. Historically the debate has centred around build vs buy. The 'buy' option typically meant selecting off-the-shelf products that provided limited customisation and flexibility for new use cases, or waiting for existing enterprise providers to add patient-facing capabilities, but with the trade-off of high cost and limited flexibility. The 'build' option was once a question of custom development, but today usually means selecting platform technology to build solutions as needed across the enterprise.
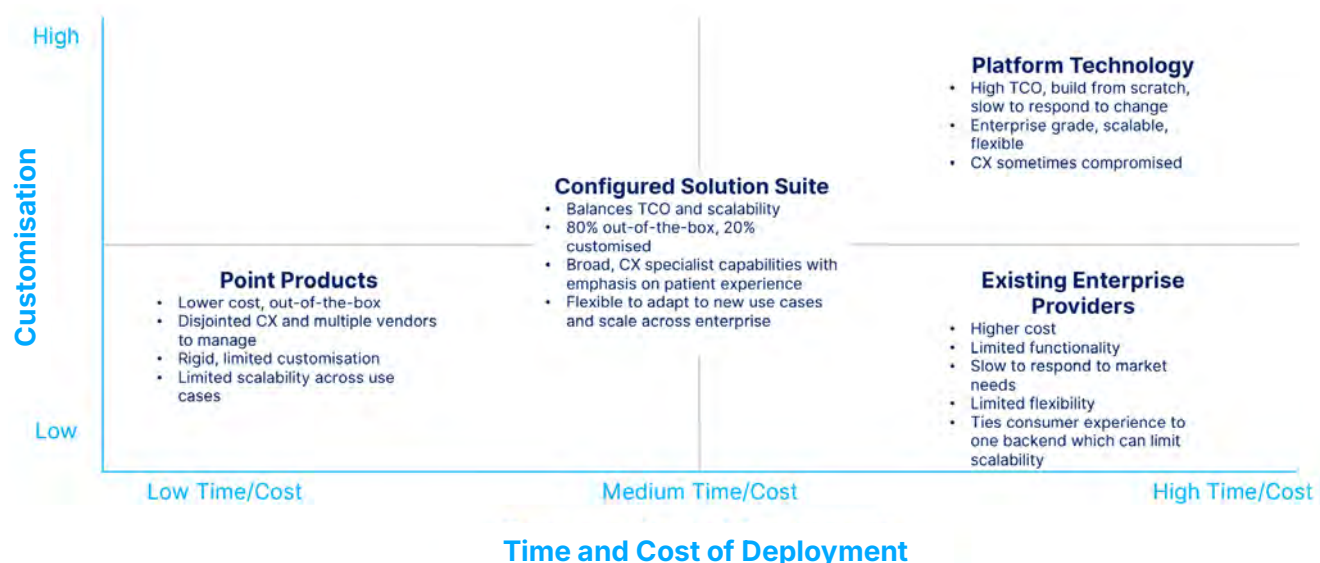
Modern technology presents a new option: the **configured solution suite**. This offers a flexible middle ground between rigid point solutions and resource-heavy development platforms.

This is where Five Faces sits.

Unlike development platforms (which require extensive configuration or development before delivering value), our solutions come 80% ready-to-go out of the box, with the remaining 20% tailored to meet a client's specific needs. This means faster deployment, less risk, and much lower total cost of ownership – without compromising on the unique requirements of your organisation. They are also low-code, with non-developers able to switch capabilities on and off as needed, including deployment to new locations.

It's a happy hybrid between starting from scratch vs getting boxed into a fixed-function product.

Platform vs Product

High

Customisation

Platform Technology
- High TCO, build from scratch, slow to respond to change
- Enterprise grade, scalable, flexible
- CX sometimes compromised

Configured Solution Suite
- Balances TCO and scalability
- 80% out-of-the-box, 20% customised
- Broad, CX specialist capabilities with emphasis on patient experience
- Flexible to adapt to new use cases and scale across enterprise

Point Products
- Lower cost, out-of-the-box
- Disjointed CX and multiple vendors to manage
- Rigid, limited customisation
- Limited scalability across use cases

Existing Enterprise Providers
- Higher cost
- Limited functionality
- Slow to respond to market needs
- Limited flexibility
- Ties consumer experience to one backend which can limit scalability

Low

Low Time/Cost   **Medium Time/Cost**   **High Time/Cost**
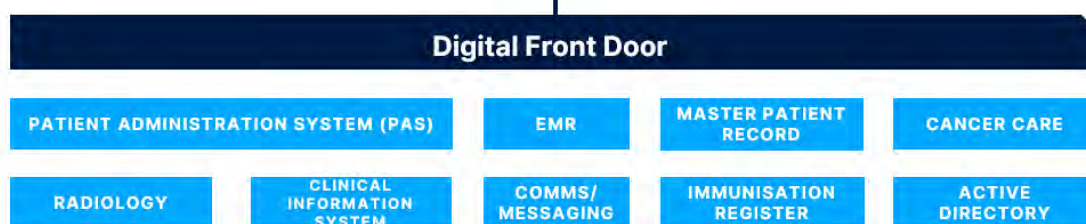
Time and Cost of Deployment

TECHNOLOGY CRITERIA

One of the key roles of digital health is to break down the silos that currently exist in the system. The ones that mean that a patient can have a very different experience from one hospital to the next, one clinic to the next, and even one touchpoint to the next.

We need digital health technology to act as a seamless pane of glass over the technical tangle of legacy systems, giving patients one digital 'home' they can turn to that's consistent.

So, what does it actually mean when it comes to patient experience? It means choosing a technology provider that:

- **Offers a broad range of patient experience capabilities** – not just the ones you need now, but ones you might need in the future as your digital health capability matures.
- **Can integrate with *all* your source systems** – has the capability to become enterprise-wide, even if you are creating a digital front door initially for one part of the organisation. It will need to conform to industry standards and best practices such as use of the OpenAPI Specification (OAS) and bi-directional HL7 and FHIR.

- **Has interoperable solutions** – that are based on the same technology, administered in one place, and work seamlessly with each other. That means no solutions that were acquired or use legacy technology.
- **Can adapt easily to new use cases and scale across the enterprise** – it's important to choose technology where change management is easy and adaptable – and not reliant on the vendor making code changes. Look for technology that uses configuration that you as the client can control. For scalability, can you scale across departments, use cases, hospitals and districts – even if the source systems differ?
- **Meets enterprise security requirements** to ensure patient and information security are protected.
- **Provides a mobile-first approach to patient experience** – mobile is the future, and the mobile patient experience is paramount. Ensure patient experiences are consistent across touchpoints and offer a mobile option – including for touchpoints such as check-in.

Digital Front Door

| PATIENT ADMINISTRATION SYSTEM (PAS) | | EMR | MASTER PATIENT RECORD | CANCER CARE |
| RADIOLOGY | CLINICAL INFORMATION SYSTEM | COMMS/ MESSAGING | IMMUNISATION REGISTER | ACTIVE DIRECTORY |

Learn more about Five Faces' DX5 Framework that underpins all our solutions

"Healthcare consumers' expectations for easier, faster, retail-like experiences are not fading away."

– Arielle Trzcinski, Principal Analyst, Forrester

WE LOVE DEVELOPERS... BUT

As a software company, we love software developers. They're super-smart, have a particular fascination with food and sandwich presses, and create beautiful software.

BUT.

Enterprise technology has come a long way in the last few years.

As a customer, today's technology reduces your reliance on developers (and therefore the vendor) and provides autonomy and control over enterprise software. This enables your digital health teams to lead how the product works and the resulting workflows, based on what suits your organisation and your patients.

The trick to this is **configuration** and **flexibility**.

Once, tailoring enterprise software to a customer's needs required a formal process of requirements gathering, then getting developers to change the code, then releasing it for testing and deployment (this could take months and in many cases years). Often, the requirements had changed by the time the software was ready.

Modern technology is configurable. By the client. So, adapting the software to suit workflows for different models of care, different clinics, or departments, or hospitals – can be done by the health provider or their local support team – without developers, or the vendor's involvement.

There's no better illustration of this than what one of our clients achieved in rolling out a digital front door solution to 200+ outpatient clinics.

CASE STUDY

Outpatient Clinic
Digital Front Door Rollout

We supported our client to digitise two outpatient clinics – automating workflows such as appointment notifications and check-in.

After that, they rolled out **another 200+ clinics** – that all had different workflows – without our technical support.

This self-sufficiency and change management is unheard of in enterprise software.

60%
Reduction in Did Not Attend rate for appointments

76%
Reduction in wait times

93%
Reduction in consumable costs (paper & postage) by digitising

90%
Digital check-ins

CONCLUSION

Digital health leaders must take a scalable, strategic approach to introducing digital front door technology. Research by Bain suggests that **63% of healthcare providers are looking to reduce the number of vendors** in their health tech stacks. They also cite a lack of cross-solution interoperability and poor eMR integration with existing tech stacks as some of their top pain points. Key areas for investment are patient intake and flow (a key component of the digital front door), along with telehealth.[6]

What are the key takeaways from this white paper?

- Select a digital front door provider with a **broad range of capabilities** to allow for reduced vendor management and futureproofing.
- **Think big!** Use the digital front door to strategically break down existing silos. Ultimately aim for a consistent patient experience across your whole organisation. Think of the digital front door as a seamless pane of glass that protects patients from the underlying tangle of technology. Therefore, separate the digital front door from underlying existing systems – don't rely on a provider that only services part of your patient cohort.
- Choose a provider that prioritises **integration, interoperability, and accessibility**, with bi-directional HL7/FHIR and adherence to WCAG 2.1AA guidelines.
- Make sure **technology is low-code and configurable** to speed up rollouts and reduce the cost of ongoing change management.

And finally, putting the patient at the centre of care is a given. But we need to make sure that our perception of patients is in line with how they see themselves:

"An important change would be to stop viewing patients as needy and docile but rather as empowered, critical and tech savvy consumers that need to be wooed with flawless experiences." [7]

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[6] https://www.bain.com/insights/2022-healthcare-provider-it-report-post-pandemic-investment-priorities/
[7] https://customerthink.com/how-customer-experience-is-changing-the-healthcare-industry/

APPENDIX 1: DIGITAL FRONT DOOR USE CASES

Once you have flexible digital front door capability in place, you will find many new use cases. Here are just a few possibilities:

We need to improve patient readiness and engagement	We need to elevate the patient experience for digital hospitals and new builds	We need to better prepare patients for surgery and reduce cancellations
Create a digital front door for self-service appointment bookings/changes, patient hub, queue management, forms, and comms.	Create 'phygital' experiences that bring digital touchpoints to hospitals: signage, directories, wayfinding, check-in, queue management.	Extend the digital front door to the perioperative journey and add capabilities such as journey timelines and a patient diary.

We need to reduce queues and improve the wait experience	We need to reduce long waits for outpatients	We need to streamline patient discharge
Use digital check-in and queue management to let patients wait where they like and enhance waiting rooms with digital signage and calling displays.	Automate waitlist auditing workflows and allow patients to request to remove themselves from a list.	Ensure faster, more effective discharge with digital forms, tasks, and educational resources.

We need to prepare for unexpected/ emergency situations	We need to prepare for future pandemics	We need to engage family, community and loved ones
Broadcast messages on all digital signage and send instant comms to all checked-in patients onsite.	Deploy rapid digital workflows for vaccination and telehealth appointments, visitor management, pathology, and contactless queue management.	Make loved ones part of the patient care plan with a loved ones portal and automated telehealth appointment workflows that cater to loved ones.

We make complex simple.

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