



# Show Me the Money



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# Patient Pathway Digitisation – More Than Meets the Eye

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An overview of the patient pathway digitisation process and the tools and strategies that can facilitate the journey of digitisation in radiology.



## Key Points

- Can digitisation of patient pathways create seamless patient interactions with healthcare providers and enable novel ways of cooperation between clinicians?
- To what extent, in the design of digital tools, can we draw on the experience of other service industries where digitisation is more advanced?
- How much of the success relies on properly tackling healthcare specific challenges in user experience and technology?

As consumers we have come to expect a hassle free and personalised digital online shopping experience. As business professionals, our interactions have changed thanks to a wide range of new digital tools at our disposal. Can digitisation of patient pathways create similarly seamless patient interactions with healthcare providers and enable novel ways of cooperation between clinicians? To what extent, in the design of digital tools, can we draw on the experience of other service industries where digitisation is more advanced? And how much of the success relies on properly tackling healthcare specific challenges in user experience and technology?

Creating a website with medical appointment bookings is a typical place to start the digitisation journey. Here, seemingly - adapting user experience designs from e-commerce or hotel booking websites - should result in a positive patient experience and in efficiency gains for healthcare providers. But while this approach may be enough for standard general practitioner appointments, booking more complex procedures, such as MRI or CT scans on the Internet presents a whole new set of challenges. For example, the required procedure should preferably be correctly and precisely identified at the time of booking rather than only when the patient shows up at the clinic. This is important to adapt bookings to efficient rostering, especially in high-volume imaging centres where grouping similar procedures saves time and allows to serve more patients on any given day. At the same time, it should

ensure, that all patients are accommodated. So, what degree of precision is right: for example, in the choice of the anatomical area, should we stop at “head” in a drop-down menu or distinguish between “brain”, “sinuses” etc. and how can patients alone choose the right specification for their MRI exam?

The difficulty is that with each gain in precision, the booking platform becomes more complex. This in turn leads to some patients becoming confused – especially when medical terms are used, giving up the web booking process altogether and calling the call centre or visiting the clinic. Hence, actively managing the trade-off between simplicity and precision is key to good healthcare services booking web design. Such choices cannot be simply outsourced to a web design consultant - they need to be decided upon in a collaborative effort involving digital, operational, and clinical areas. This type of collaboration enables to consider the consequences of the input gathered during the booking process for the entire patient journey. This is similar to e-commerce – where transactional web design is adapted to the order fulfilment process.

The standard approach to develop such websites – typical in e-business, but often new to healthcare organisations – is that of continuous improvement, following the launch of an initial version, based on relentless drilling down detailed usage data to identify and remove pain points at every digital touch-point along their journey. This approach has been proven to work at Affidea: web bookings of complex MRI and CT exams



can increase 2-3 fold post initial launch and reach levels of several thousand a month in a single country operation.

How will the process of advanced healthcare services web booking evolve in the future? Looking at other industries, the direction is in reducing the number of questions that the customer/patient needs to answer. For example, banks and insurance companies have successfully achieved this in the

or second opinion reports in sub-specialised areas: prostate and breast scans with PI-RADS/ BI-RADS gradings are a common example. The breadth of specialities that becomes available in this way is an important part of the value proposition that a focused diagnostic company brings to any single hospital on top of economic considerations.

For patients and referring clinicians – the technological chal-

## Allowing radiologists' remote work enables easier demand-capacity management. It also gives patients in smaller or more remote centres access to primary or second opinion reports

purchase process of say – a consumer loan, a car insurance or home insurance, by drawing on information from available databases.

Similarly – in healthcare, what consumers want is personalised information and guidance. One might expect that in the near future – key information will be read directly from a digitised referral and patients' medical records rather than input by hand by the patient. E-referrals are an important step in that direction.

A second natural area of digitisation is making results of medical exams available remotely. Making the test results of any medical examination available online is nowadays practically commonplace. However, for a company like Affidea, which has a significant diagnostic imaging business, delivering images of CT and MRI scans to reporting radiologists, to patients and to referring clinicians is also of immense value for each of these groups and creates new network effects.

Reporting radiologists typically access these images directly in diagnostic companies' Picture Archiving and Communication Systems (PACS) and work in dedicated centres or at home on medical grade monitors. Allowing radiologists' remote work enables easier demand-capacity management. It also gives patients in smaller or more remote centres, access to primary

challenge of offering access to images is greater, since standard web browsing technologies – on desktops and mobile devices need to be accommodated. Images from MRI and CT scans are delivered in DICOM files which measure several hundred megabytes, while the size of an entire repository of a diagnostic imaging business can easily approach petabytes. But, if movie streaming companies can overcome the challenge, so can a diagnostic imaging business, using some of the same streaming technologies.

While formal reporting needs to be done by qualified radiologists on medical grade monitors, easy access to diagnostic images is valued by referring clinicians for illustrative purposes, e.g., for discussing surgery options. Affidea is deploying the access to images feature via patient portals and clinician portals in more and more markets. Where this feature is already in place, it has shown to facilitate discussions of the more complex cases between radiologists and referring clinicians as well as between referring clinicians themselves in both formal and informal settings. This way – existing networks are being strengthened and new networks are being formed between referring clinicians and radiologists in a way which benefits the patients and cements the relationship of the company with the broader medical ecosystem. ■