



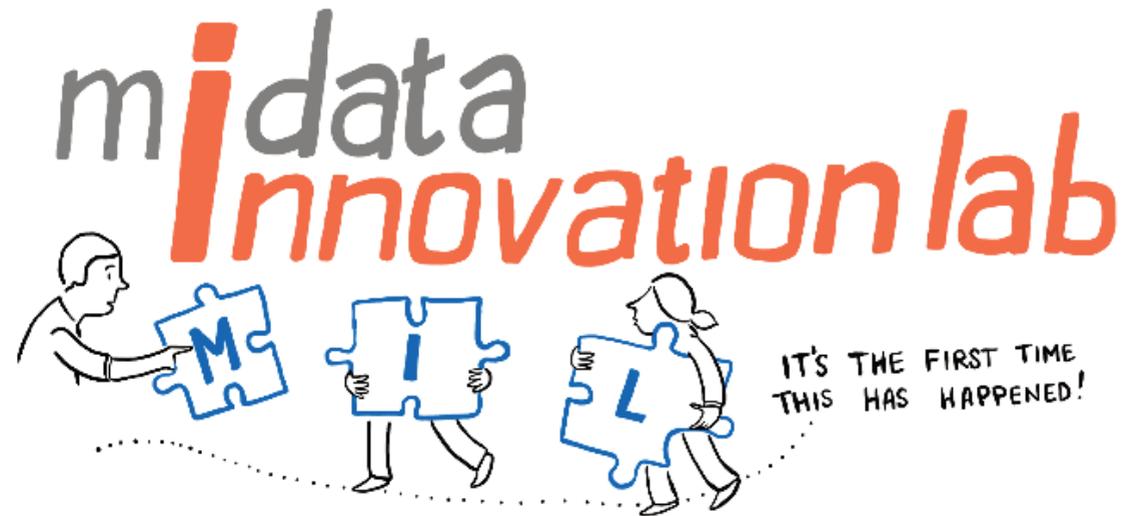
Department
for Business
Innovation & Skills



The midata Innovation Opportunity

Learnings from the midata
Innovation Lab

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November 2013

The mL Partners

About this report

This report is compiled by BIS with Ctrl-Shift, with input from the midata Innovation Lab partners.



Foreword



Jo Swinson
Consumer Affairs Minister

Today's most successful businesses are the ones that are creative about building customer relationships. The 'midata' Lab has been an exciting opportunity to put this to the test and explore how businesses could help customers use the data around their spending habits to make better choices.

The Coalition Government recognises in our Information Economy Strategy that there is a lot to be gained from being open and using the information gathered from customers with their consent and knowledge.

Developing new and innovative ways to see data also helps improve customer service which will in turn promote growth. I would encourage business and developers alike to take advantage of this opportunity and help establish the UK as a leader in the digital market.



Sir Nigel Shadbolt
Chairman, midata

Data is the raw material of the information economy. With personal data we can crystallise data's potential around the specific needs and circumstances of individuals. The midata initiative maximises this potential by empowering individuals with the ability to access and re-use their data for their own purposes. It also demonstrates to the private sector the opportunities for more effective transactions and services with data empowered consumers.

From its earliest days, we always said midata was a platform for innovation; the launch pad for a new breed of personal information services. The midata Innovation Lab is an effective demonstration of this innovation opportunity.

Now we have a chance to take the mIL's work further. As part of its Strategy for Data Capability the Government is convening a working group to widen the midata programme. A particular priority is to explore how to get citizens back the individual data that is held on them by central government.

This offers an opportunity for even greater innovation around personal information, promising benefits for consumers, citizens, businesses and government alike.



Dan Bates
Director, midata Innovation Lab

A major success of the mIL story is how organisations can work together in a different way to achieve consumer benefit. Each app we developed has its own powerful collaboration story, as does each learning strand. We saw household brand names working with small start-ups, regulators working with the regulated, and cross-sector engagement focused on making people's lives better. We had the expertise yet the humility to behave as peers in this consortium of the willing, the bond we had was an assumption that those involved were genuinely trying to make things better.

The mIL has provided a unique place to allow that to happen. What we've shown is a new way of working between the public and private sector, and I hope that that is as much a glimpse into the future as the applications and learnings that we have developed.

Executive Summary

The midata Innovation Lab (mIL) was set up as a collaborative learning exercise designed to explore the innovation opportunities now being opened up by midata - a UK Government programme designed to empower consumers with their own data.

The midata programme, run by the Department for Business, Innovation and Skills, is an initiative to help consumers access and use data collected about them by service providers. midata is intended to act as a platform for innovation.

The midata programme introduces a new idea to the business world: if personal information from many different sources - about an individual's attributes, transactions, or behaviours - can be accessed by and organised around that individual, it could become the fuel that drives a rich array of new types of information service that help them collect and manage their own data, and use it as a tool to help them achieve their own goals and purposes.

The midata Innovation Lab (mIL) was designed to explore a new midata-enabled scenario where consumers can choose to grant service providers access to their rich personal data where the data is used to inform and drive a range of innovative new information services. Key questions addressed by the mIL include:

- What sorts of innovation does midata enable?
- What consumer benefits do they create?
- What are the business opportunities?
- What are the potential risks and pitfalls for consumers and business alike?

The mIL brought many different organisations from different backgrounds (commercial, consumer interest, privacy, regulatory and academic) together to explore the innovation opportunities in an open, safe environment. The mIL demonstrated that this sort of collaboration can be extremely powerful - especially the cross-fertilisation of ideas between experts with different backgrounds working together to the same goal.

The mIL's infrastructure consisted of a virtual environment where volunteer 'data donors' uploaded their own personal data into secure personal data stores, from which app developers could access the data (where permitted), and develop innovative services around them.

Key findings include:

- Joining up different data sets, making the individual the point of integration of their own data, really does open up new innovation opportunities.
- Consumers (and businesses) focus on the value opportunity, not the data itself.
- Concerns about privacy and data security run deep and must be addressed if services are to win trust and succeed.
- Initiatives like the midata Innovation Lab can greatly accelerate the development of new concepts and approaches by creating an environment where diverse stakeholders can collaborate, learn from each other and experiment.
- midata could play a significant part in the growth of the digital economy.

Introduction: Why the mIL?

Industry has been using data to better engage with consumers for many years. With midata a new idea is entering the mix and changing the agenda: If personal information - information about an individual's attributes, transactions, behaviours and so on - can be accessed and organised around that individual, it could become the fuel that drives a rich array of new types of information service.

The UK Government wants the UK to be at the forefront of this shift, becoming a world-leader in this emerging personal data market.

To enable a market and new consumer opportunities from personal data-enabled services three things need to happen. Firstly, data has to flow, or be accessible. Secondly, business needs to develop innovative uses of the data. Third, consumers need to be interested in using or buying those data-driven applications, as well as being confident that their data and their privacy is protected whilst they do so.

To address the first of these, in April this year, the government took a legislative power in the Enterprise and Regulatory Reform Act that enables it to enact, if necessary, secondary legislation that would require business to release transaction data they hold on consumers back to those consumers. That leaves the other two ways: business innovation and consumer interest.

Up to mid-2012 there had been a lot of midata forum discussion, external expert and observer opinion as well as a significant amount of informed and not so well-informed

blogging about the subject. In particular, there was opinion and position taken by many that consumers wouldn't be interested, and that the risk of data and privacy abuse would outweigh any potential benefit.

It was, however, not clear how much of this push-back directly reflected the views of consumers, and how much was resistance to change and nervousness that key data that a business holds could be used by its competitors or third parties to the commercial detriment of the data-holding organisation.

The benefit and risks assessment around personal data was clearly, and not surprisingly, as immature as the market opportunity debate itself. It was also really clear that no-one had all the answers. There were, however, organisations who were starting to see the opportunity for innovative data services. There were others who were just interested in finding out more.

With each individual organisation at a different stage in the thinking and engagement, we needed a way to capitalise on the interested and open-minded, regardless of where they were on the journey.

So the midata programme had the idea of doing something practical to explore and experiment, to create an open environment to allow the willing and curious to collaborate to try to find some of the answers. The concept was this: Build an environment where learning-oriented, collaborative organisations across different parts of the economy could explore together what the opportunity and risks might be. The environment would be an accelerator - a unique mix of the sorts of things you see in think tanks, in working parties, and industry bodies, in innovation sessions, in laboratories and the like.

The aim was to materially move the journey and debate on through the perspective of doing something practical.

npower

“As we aim to digitise more of our business, creating the ability to move data around in a safe but flexible manner is becoming an ever increasing priority for us. Understanding how to do this within our own organisation is one piece of the puzzle, but as customers gain access to their digital data from other organisations, both the complexities and possibilities increase.

To this end, the aims and ambitions of the mIL offered an opportunity for us to consider how trends towards better access and portability of personal data would impact our customers and our business. By taking part in the cooperative and innovative environment created by the mIL, we hoped to gain insight into the possibilities that might emerge in the future as well as play an active role in helping define the roadmap towards this future.”

Who this report is for

This paper is relevant for anyone who is involved in the use of personal information in their work. Typical roles would be:

- Product and Service Development
- Business Development
- Business Intelligence and Information Management
- Business Technology
- Marketing and Sales
- Strategy
- Privacy and Security
- Risk Management

The mL: What we did

On the 14 May 2013 a range of different organisations from different backgrounds (commercial, consumer interest, privacy, regulatory and academic perspectives) were invited to join a project to set up the midata Innovation Lab (mIL). The plan was to create an open, safe environment where all the key parties and stakeholders involved in the new personal information economy could collaborate to gain a deeper understanding of the innovation opportunity.

The plan was to work closely with these 'Founding Partners' to shape and build the environment quickly to enable practical activity to take place (some partners joined later). It was also intended that the mL would not try to predict answers or pick business model winners. Instead we would help people collaborate to explore ideas and concerns, look for and test out potential answers, business models, innovations and the overall consumer value exchange of benefit versus effort and data-sharing.

A unique data set

The unique value of the lab was its ability to offer a unique dataset, consumer insight and collaboration with all partners of the ecosystem that would be difficult for any one organisation to collate.

The way of working was also important. No organisation was charged or paid to be part of the mL. The mL was to be a collaboration of those willing to put something in to get something out. This enabled organisations to contribute expertise, either in helping to set the mL up, or in the learning and analysis stage. Organisations agreed a common set of principles about how to work together

and to ensure the protection of any consumer data contributed by data donors. It was also important to create a structure that fostered both collaborative sharing whilst at the same time allowing individual businesses to use the mL to privately explore their own commercial interest in personal data.

As well as the content that was being explored, the partners were also encouraged to operate in a collaborative way. Particularly, the mL was interested in fostering a new kind of working relationship between the private sector, government, regulators and consumer groups. A collaborative relationship where respect and equality was expected as a building block. Whether a major brand collaborating with small start-ups, or government listening hard to private sector views, the expectation was that the environment was important to allow collaboration and exploration for consumer benefit.

The world is inexorably moving to a place where consumers have more power based on unlocking their data as a powerful asset. The mL was set-up as an opportunity to learn lessons fast about what that future might look like, so that the UK can seize the opportunities and safely innovate new consumer services and benefits.

“The mL was interested in fostering a new kind of working relationship between the private sector, government, regulators and consumer groups.”

Telefonica

"The mL have begun exploring the personal data space, helping both private and public sector understand what's the value in it not only for organisations, but for individuals as well.

"The applications each of the work groups designed are a clear demonstration of how using personal data can help improve how individuals perceive the use of data, how we can leverage this to increase confidence in digital services, and individuals can better understand the benefits of a data-driven economy.

"The mL is a good example of how individuals can safely contribute with their personal information, and clearly understand what they should be looking for whenever asked to share their personal information - it's not only a business innovation platform, it's also an educational journey."

Targeted learning

The mL's collective effort targeted three areas.

- To build some really interesting apps and services. From the start it was agreed it would not matter if these are market ready. What would matter is that they will show the potential of what can be achieved.
- To use the unique collaboration of experts involved in the mL to help deliver an evidence base that allows us to analyse the opportunities for this emerging market, including how consumers' and businesses' attitudes shift as they become more involved in the experiment.
- To be transformative. The mL was to act as a kick-start to engagement with midata by creating a collective inflection point in business where the idea of passing the control of data back to customers becomes intuitive.

The mL: What we did

The first stage was to build and commission the mL's infrastructure. This was built as a virtual environment, using three operational and accredited personal data stores (Allfiled, Mydex and Paoga) selected from a number of bidders for their ability to meet the mL's high data protection and data security expectations. This allowed the mL to rely on already-operational security protocols and comply with the Data Protection Act, to ensure data security. Developers would not be able to take the data out of the mL, rather, they would develop applications that would access the data via secure encryption keys for a length of time relevant to the technical operation being made, and only as permitted by the consumer via use of the application.

The second stage was to build a mL web portal so that consumers could contribute data into the personal data stores.

Experiment and learn

The third stage was to run the experimentation and learning. Within three broad headings, we set up 9 different strands of learning, covering areas including innovative services and social good, consumers and data, and finally research, analysis and protection (see Figure 1).

The broad headings were:

- **Service Innovation** - What apps and services could be developed for consumers? What social good applications could personal data support? How can we create a "developer club" to spark entrepreneurial interest?
- **Consumers and Data** - Engagement with consumers into the mL, build of technical platforms to run the mL, and how personal data fits with Open Data and Quantified Self data.
- **Research & Analysis** - What do consumers think of the value exchange, i.e. the benefits versus effort and privacy concerns of allowing data access by services to create personalised benefit for them? What do business think of the business opportunity?

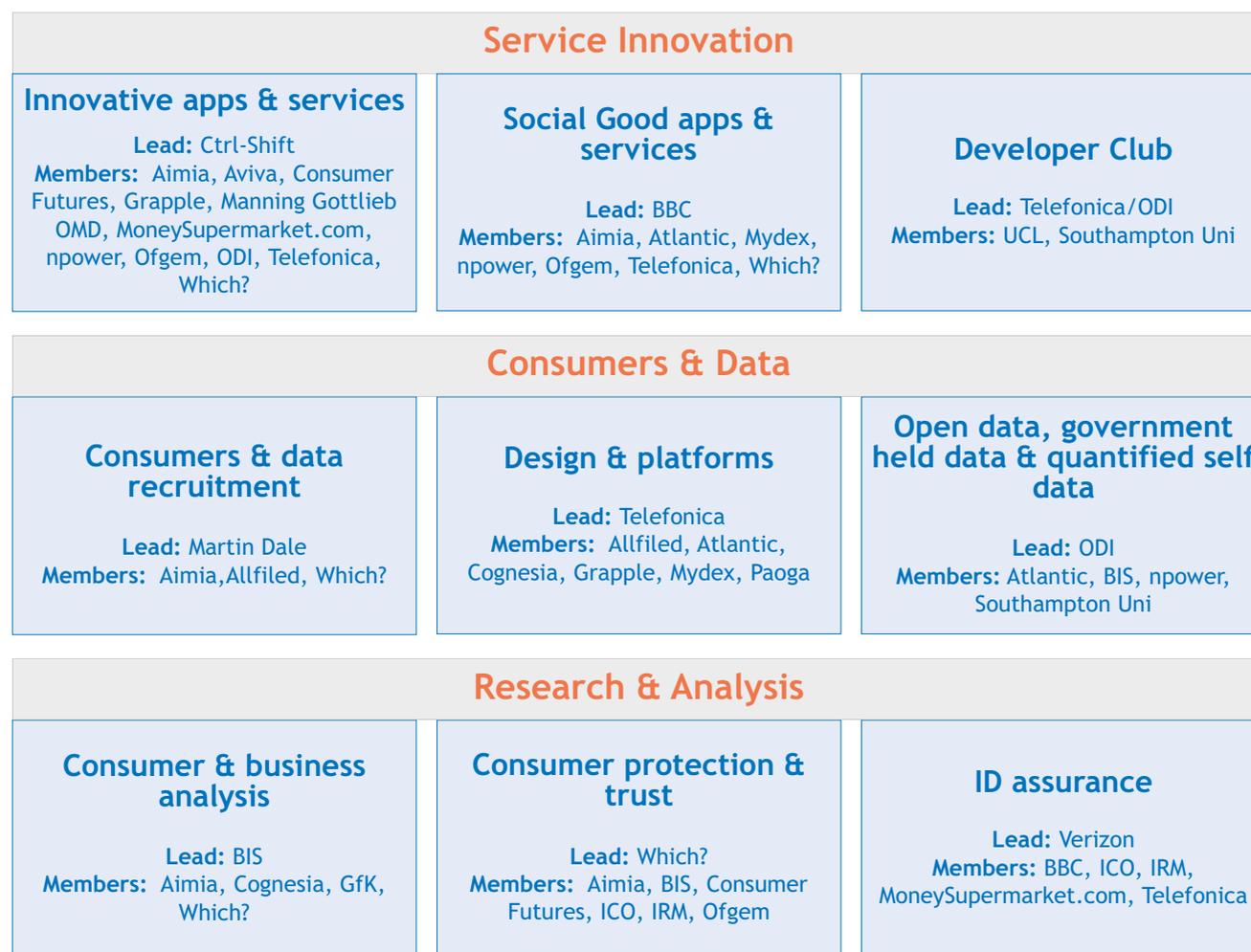


Figure 1 The nine learning streams at the heart of the midata Innovation Lab

The apps

The mIL was set up to engage consumers by asking them to donate personal data that would then be used by businesses and developers to create innovative services. The idea was that we would then demonstrate these applications to the donor consumers.

As the mIL developed, it was clear that the effort for the mIL's consumers to donate data was significant. Without being able to articulate the services that might be created, it was going to be difficult convincing a large number of consumers to invest the time needed to access their data.

Value exchange

In a sense we had got the "value exchange" the wrong way round. We were attempting a conversation with consumers along the lines of "if you provide data we will show you some great services". So we decided to focus the latter stages of the mIL on building some innovative prototype applications that we could show to consumers. By not limiting the concepts to utilising the defined dataset we had asked consumers to provide, the opportunities we could demonstrate would be even more potent.

The partners subdivided into five separate application development teams, including commercial organisations, regulators, government and consumer groups. Each team had a headline area to work with and explored possible applications before deciding on their choice. Each team built a business model for the idea, use cases and wireframes. The wireframes were then turned into working html prototypes by two of the partners who had the technical expertise to really bring the apps to life.

Mi Finances

Many consumers stumble into debt crises they could avoid if they were forewarned. This app uses the sorts of algorithms used by banks to decide when to restrict credit. Using the individuals' transaction data the app provides advice on how to optimise debt repayments and how to improve spending decisions. By including actual personal data the recommendations are specific and relevant to the individual.

Benefit to individual

The app provides individuals with the ability to better understand monthly incomings and outgoings. This could help them predict - and avoid - future debt crises. It also provides specific actions that the individual can take to manage and improve their financial situation to avoid credit restriction and credit rating issues.

Wider benefit

By encouraging proactive debt management and behavioural change, the app could help banks, credit institutions and other providers of goods and services write off less bad debt. This benefits the economy as well as the financial institutions

The Money Charity estimates UK Banks and Building Societies wrote off £3.67 billion of loans to individuals over the four quarters to Q2 2013. For every 1% that the app reduced UK household bad debt that would equate to approximately £37m in this sector alone.

Data required

Personal current account transaction history, credit card transaction history, account type and interest rates, personal income and benefits received, retail, grocery leisure and other household spend data.

Partners involved

BIS, Ctrl-Shift, Telefonica and Natural Interaction.

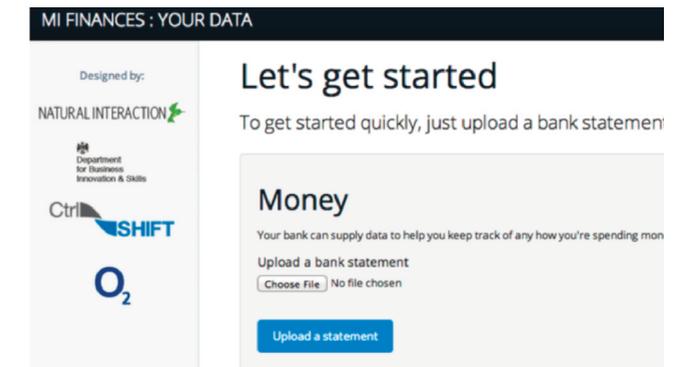


Figure 2 MiFinances app

“Personally I think [the Mi Finances app] is very good and can see that this would be helpful for a lot of my clients! When I review their bank statements, I tend to manually go through this with them and highlight their spending habits and where they could save money”

Independent mortgage advisor asked to review the Mi Finances app

The apps

Stay Safe, Keep Warm, Save Money

Many vulnerable people are entitled to energy support but don't know they are, or don't know how to access it. This app helps them find out what energy help they are entitled to based on their individual circumstances and to get this energy support from local authority or energy provider.

Benefit to individual

The app enables increased access to services for those entitled to fuel benefits to stay warm and save money. It's a hassle-free way of interacting with energy companies which is directly controlled by the individual. Individuals can feel confident they are accessing the right services for them - the app can auto update individuals as new services come on stream.

Wider benefit

For energy providers, who are obliged to provide energy credits to vulnerable people, the cost of finding them can be significantly reduced from an estimated average of £30m per year (£168 per relevant customer). If 50% of vulnerable consumers were identified using this service, and assuming that the charge was £10 per conversion, this alone could save the industry over £50m p.a.

UK Government and society also benefit from reduced fuel poverty related winter deaths, improved progress towards carbon reduction targets, and eco-enhanced housing stock.

Data required

Information on family members and circumstances, income & benefits received, Open Data on housing stock (type of house, construction etc), Government held personal data on benefits paid, energy companies' data on eligibility measures.

Partners involved

BIS, Allfiled, Consumer Futures, Ofgem, Ctrl-Shift and npower.

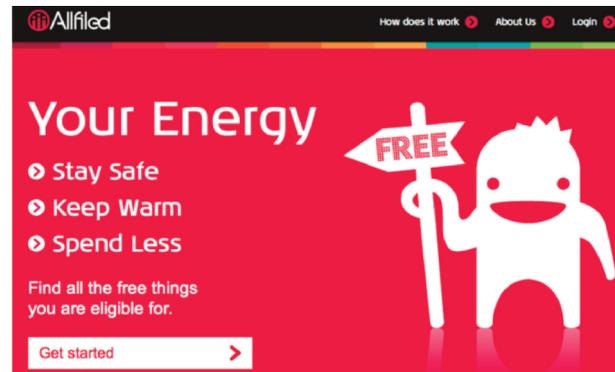


Figure 3 Your Energy app

“The Relative Calm app has massive potential. We would be pleased to be a trial site when you develop it”

Local Authority Director of Social Care

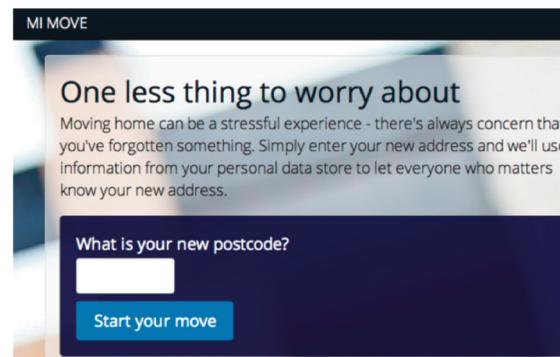


Figure 4 Mi Move app

Expert Home Mover

The app helps individuals notify everyone who needs to know about a new address (e.g. energy, telephone, bank and credit card suppliers) automatically, so that they don't have to spend time contacting and following the different processes for each company. The process is simplified through automation of data transfer to relevant third parties e.g. legal, financial, utilities.

Benefit to individual

The administration around home moving is a huge, unfamiliar and infrequent process for most people. As a result, the process can be arduous, stressful and open to costly errors.

Wider benefit

The app helps ensure registration and payment transfers to new utilities and councils aren't missed.

Data required

Address-based personal data related to your existing property based on key accounts from mortgage / bank, telecoms, energy and council / government.

Partners involved

Manning Gottlieb OMD, npower, Ctrl-Shift and Natural Interactions.

“It was also becoming very clear that what we had been building in the mIL was a increasingly supportive and collaborative mindset amongst the participating organisations. Organisations of different sizes, industries and role were having some extremely high quality discussions together and were listening to different points of view. It was clear that those involved in the mIL were stepping forward on this journey together”

Dan Bates, mIL director

Mi Health

This app connects with the individual's GP or other health providers and helps individuals with long-term health issues to understand how changes to their lifestyle could improve their health and avoid medical intervention. It does this by allowing access to the GP through a "chat" interface or through email. It also offers other advice such as where to eat healthily or where to find a quick exercise 'fix' using location and map data.

Allows GP's to view individual's data thereby supporting long term health management and reducing face to face appointments.

Benefit to individual

Managing a long term health issue can be complex and time consuming. The app eases the burden while offering positive support and 'nudges' to other ways to stay healthy.

Wider benefit

For GPs, the app offers a more efficient way of managing long term patients, cutting down on time-consuming and expensive surgery visits while helping them support patients wanting to make healthy choices. The aggregated anonymised data provides a rich dataset for health professions and policy makers to help tailor service provision.

Data required

The data to support the app comes from the GP and the patient about their health and treatment, drugs and services; personal measurement (weight, exercise, sleep). Information from gyms, restaurants, supermarkets all enable an automatic evaluation of progress to support individual's decision making.

Partners involved

Natural Interaction, Ctrl-Shift, Mydex, Telefonica and BIS.

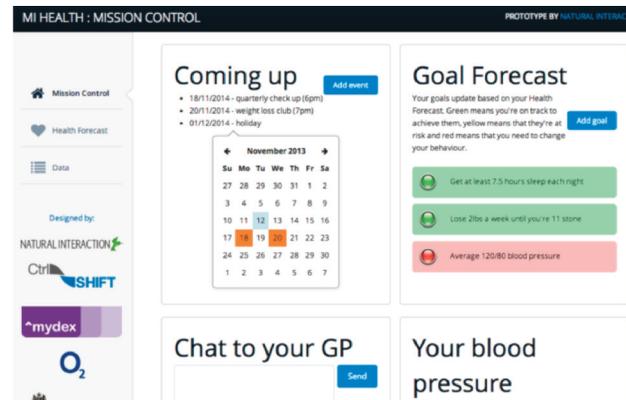


Figure 5 Mi Health app

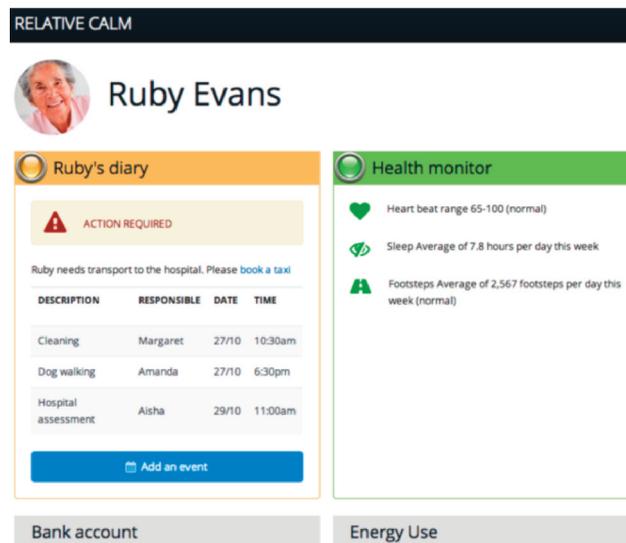


Figure 6 Relative Calm app

Relative Calm

With this app, regardless of location, relatives and carers can access a dashboard of data to help see if an elderly or vulnerable person is getting out of bed each morning, is keeping their home at a safe temperature and is not taking out unusual amounts of money from their bank to pay for work they don't need.

Benefit to individual

For the vulnerable person, the app provides security that they are being cared for in an effective way consistent with the realities of life for today's carers, family and friends.

Wider benefit

For the family the app provides an opportunity to quickly and effectively help the vulnerable person stay safe. It could also reduce the cost of caring for local authorities by allowing connected digital information that a wider set of concerned people can assist in managing.

Data required

Energy data, financial transaction data; health data such as movement monitors; diary data.

Partners involved

Natural Interaction, Atlantic Customer Solutions, Mydex, npower and BIS.

"The Relative Calm app would not necessarily solve isolation, but can see that participation of those concerned about an elderly person is greatly increased. Of course, the data sharing must be consensual"

LGA Regional Co-ordinator for ADASS (Association of Directors for Adult Social Services)

mIL Findings: The innovation opportunity

The mIL was as rich a learning opportunity as we had hoped. The learnings fall into four main areas: communicating the opportunity, insights into the evolution of the market, a learning agenda and the opportunities opened up by innovation labs.

Communicating the opportunity

For this market to take off, all involved need to talk value, not data. Data in abstract is boring and potentially intimidating while good tangible value propositions create excitement and engagement.

That doesn't mean we shouldn't ever talk about data. The data discussion comes out of the value discussion. Once we are explaining what an app or service does and how it works, we also need to explain how and why its use of the data is necessary and trustworthy. In this context, clear, concise terms and conditions are critical.

Helping people 'get it'

The new personal information services made possible by midata change 'the rules of the game' by changing the ways in which personal data is collected, managed and used (putting individuals at the heart of the process). When confronted with this idea, first time round, most people simply don't 'get it'. Communicating the opportunity needs time for the idea to sink in.

Innovators need to clearly explain just how big the opportunity is. For example, Stay Safe, Keep Warm, Save Money is a relatively simple app using only a few bits of data. It does not combine large amounts of data from many different sources or do complex analytics. Yet it could still save the energy industry up to £50 million a year, while helping fuel poor customers get the energy they need and meeting Government policy objectives.

Top business learnings from the mIL

- 1 Joining up different sets of data from different companies and industry sectors really does create new innovation opportunities. For example, the Stay Safe, Keep Warm, Save Money Energy App combines data from Government, energy providers and individuals to help all sides reach their goals.
- 2 Government held public sector data is very powerful if added to the mix.
- 3 Communications should focus on the value, not the data. Innovative value-creating apps create excitement and engagement for consumers, businesses and politicians alike.
- 4 Apps create a *demand* for data (while the midata programme itself focuses on the *supply* of the data - releasing the data back to the individual). The two need to be brought together.
- 5 Innovation labs like the mIL provide businesses, developers, regulators and policy makers with an opportunity to accelerate innovation in a safe environment in a way that gets the best out of all parties. We've hardly scratched the surface of this opportunity.
- 6 Issues such as consumer protection are as much about 'engineering' as policy or regulation, because it all depends on the practical ability to design and inter-operate safe systems.
- 7 Business, legal and technical market enablers also need to advance hand in hand - they are interdependent, and need to be managed in a way that reflects this.



Insights into the market's evolution

In the personal data services market there are two different angles from which to approach the innovation challenge. The first starts with data and develops ideas from this data. This approach can be very fruitful. Experience elsewhere shows that analysing new data sets regularly throws up unexpected insights and opportunities.

The second approach is to start with a consumer or business need, to identify new ways this need can be met, and then to look for the data that's needed to provide the new service. In many cases, a simple data schema is all that's needed. The actual data itself can follow later.

Both approaches have their merits. But the learnings from the mIL show the needs-driven approach focuses minds better and gets quicker results. The 'interrogate the data' approach is probably better suited to a more mature market when data sets and supporting infrastructure are more established.

The basic infrastructure needed for the new market (communications, data transfer and data storage technologies) already exist. What's missing are the policies, 'rules of the road' and common standards that underpin commercial applications. To take a parallel from

air travel, the Wright brothers proved air flight was possible but it took many years to design commercially viable aeroplanes, airports, and air traffic control systems. Trust is crucial, not just with consumers but with and between businesses too. This includes new infrastructure providers such as personal data stores.

Market evolution

In designing new services, we need a better understanding of consumer behaviours including behavioural economic effects. This understanding can be turned to services' advantages by, for example, providing consumers with apps that deliver 'personal nudges' reminding or prompting them to do things. It will also help identify the security and protection measures necessary for confident consumer engagement, for example 'nudges' that highlight certain terms in privacy notices.

With device and platform proliferation, it's usually better to develop web services that connect to these devices and platforms but which remain device/platform agnostic.

The market will evolve. Take an analogy from the music industry. MP3 players created the technology, but the market didn't really take off until Apple introduced the iPod which made it easy for consumers to buy music while



offering music publishers commercial incentives via guaranteed royalties. Then the iPod evolved from music on the device to music on the cloud. The personal data services market needs similar, evolving combinations of technology platform, consumer convenience and commercial incentives.

Even so, different players will continue to view the market differently. Some see personal information management services as a new market based on a new and different idea (of empowering individuals with their own data). But others, including many large businesses, may regard these new services simply as 'another channel to market'. Both perspectives are valid.

A learning agenda

We are still at the early stages of the journey. Many consumers and companies don't yet see the opportunities of new personal information management services or understand how the new services will work. On the corporate side, some companies still struggle to see the difference between 'Big Data' applications and apps driven by personal data. Consumers don't understand the difference between services being able to access their data versus services that take and keep a copy of their data, which is important when it comes to trust.

One of the benefits of initiatives like the mIL is that they help us identify the questions that need to be asked and the problems that need to be solved.

"Trust is crucial, not only with consumers but between businesses too. This includes new infrastructure providers such as personal data stores."

npower

"Working with like minded organisations has been a very positive experience. The ability to create and share ideas outside of our normal focus has helped develop new insights and sparked ideas that are helping to shape our internal programme of work. Indeed, some of the prototypes developed as part of the mIL have a direct benefit for energy customers and we are looking at how we might turn these into real apps or tools and take them to market.

Thanks to the support from the mIL team, we have been able to engage in a larger number of concepts than would be possible with our own internal resource. Having this broader view has helped us see the possibilities that will come from greater data sharing and further collaboration with the midata initiative."

How to ensure consumer protection and trust in the new personal information economy is still work in progress. Most of the core questions have now been identified, but not all of the answers. Looking at consumer protection solely in legal terms (e.g. of 'data protection') is not enough. We also need to address the practical 'engineering' challenge of ensuring secure data access, management and data flows.

Many other practical obstacles still need to be overcome. One example is the sheer difficulty consumers have in finding and accessing data held about them by companies. For the market to evolve simple mechanisms for consumers to access their data need to be developed.

Even for relatively simple apps, mapping who has access to what data, or where and how the data flows, can be complicated. It will take time for developers, regulators and consumers to gain a better understanding of these data management issues.

The mIL potential

One of the exciting things about innovation labs like midata is the opportunities they identify for better, faster, safer approaches to innovation. The process of developing apps brought together people who would not normally work with each other: experts and visionaries, businesses, consumer representatives, developers, infrastructure providers (such as personal data stores), policy makers and regulators. This turbo-charged the discussion, greatly accelerating the development of new concepts and approaches.

For big companies, innovation labs like the mIL can be a useful alternative to their own internal processes, which may be hampered by prioritisation queues, ROI rules and risk management considerations. A lab can be a way of

both enriching and speeding up the innovation process while minimising the cash input and the brand risk.

Developers need access to consumers to test ideas in cost effective ways. A lab provides the means to do so. It also gives regulators and policy makers an ‘insider view’ of emerging issues as they are being discussed and addressed.

A key role for such a mIL-style lab is to provide a safe place where all concerned can experiment in a low-risk environment. In an emerging market like this, finding a way for different stakeholders to collaborate is very important. The mIL shows there is a way to do it.

STRIKE THE RIGHT BALANCE

CONSUMER PROTECTION



Allfiled

“The mIL has brought together thought leaders that represent the essence of forward thinking in this area. We learnt that there are many people in diverse organisations who also see the power that data can bring to improving the quality of all our lives. A groundswell of change is building and a data empowered society is a real possibility for the future. Those that embrace the movement early will be winners and there is every possibility that those in denial will struggle to maintain credibility with their customers.

What does the future hold? Well, with every new initiative we move inexorably towards a personal information economy, where individuals become empowered to claim ownership of their personal data and gain all the benefits that facilitates. In our view personal data empowerment will be the antithesis of current marketing techniques that make us feel more like a target than a customer. It’s a bright future that Allfiled plans to be at the centre of.”

Natural Interaction

“Natural Interaction joined the mIL because we were interested in creating innovative products which harness personal data without losing sight of the people who use them. As a user experience design consultancy our focus is creating services, which are truly personal and enhance users’ lives so the mIL was a natural fit.

Understanding real people’s motivations is key to creating apps, which make effective use of data. Whilst technology has evolved at an increasingly rapid pace, humans are pretty much wired the same as they were thousands if not millions of years ago.

Focus on consumer purpose

Over the last few years we’ve seen a proliferation of tablets and smartphones. With wearable technology on the horizon the physical and digital worlds are coming together. For example, during your morning commute you may have looked online or used an app to find out whether your train was running on time. Perhaps that app used GPS to find your location and make more relevant suggestions? Did you think about it? Were you amazed? Of course not, because your focus wasn’t on the technology, you just wanted to get where you were going and that information helped you achieve that.

Ultimately, participation in the lab reinforced our view that whilst personal data can be used to enhance services, the data itself isn’t the end goal and focusing on delivering outcomes which are mutually beneficial to service users and organisations is critical.”

mIL Findings: What works for consumers

Talk of innovation is all very exciting, but what do consumers actually think of the opportunity? A key part of the mIL was to involve consumers - in accessing their data, and assessing the prototype apps that were developed. We took the opportunity to use the lab to test their perceptions along the way.

We ran two surveys. The first, held at the beginning of the lab, asked broad questions about the midata programme and consumers' perceptions of data security and protection issues. The second survey quizzed consumers on their reaction to prototype apps: how useful they were; whether they felt the value exchange was worthwhile; whether they felt the process was safe. The surveys were sent on behalf of the Department for Business, Innovation and Skills (BIS)¹ and were designed in collaboration with GfK, Which? and Consumer Futures.

In considering the responses we need to bear in mind that only a small number of consumers were involved, and those that were involved were self-selecting based on personal interest. The results cannot therefore be used as a proxy for wider consumer attitudes though, when even 'pro-data' consumers express concerns over data privacy and security, it's clear this issue needs to be addressed.

Consumer protection and trust

One focus of the surveys was how the volunteers perceived the risk around the use and sharing of personal data including in apps and services. This was an important area for the respondents, with two thirds regarding security and privacy issues as being "very important" - and with concerns about data sharing arising when discussing

Top consumer learnings from the mIL

- 1 Convenience** is all important. The more data entry an app or service requires the faster the fall-off in consumer take up and use. Automating data flows and use is crucial for this market to take off.
- 2 Segmentation:** Consumers differ in their concerns and priorities. There is no one-size-fits-all solution - consumer segmentation applies as much to new information services as traditional products.
- 3 Trust:** Consumers make decisions about data sharing depending on the overall context. This includes the purpose of the service and the brand offering the service.
- 4 Value:** the clearer the benefit the more willing people are to share data.
- 5 Priorities:** Switching is not the only use to which consumers want to put their data. Improved lifestyle and time saving are just as important, and often more important.
- 6 Consumer control** is a benefit in its own right. Apps and services that give consumers choice and control are much more likely to be used than those that don't.
- 7 Public and private:** The inclusion of personal data held by the Government is a significant benefit when designing new apps and services.
- 8 Consumer protection:** Privacy and misuse of data remains a key concern amongst consumers, and simply *has* to be addressed if this market is to flourish.

particular apps. Even among relatively involved consumers, there was some nervousness around the sharing of data and the uses that it might be put to. With the Home Mover app for example, four fifths expressed concern that their data might be sold on without their consent, while with the Health app a half were concerned that service providers might ask for more information than was really needed.

One significant insight, however, is the contrast between an abstract, general 'willingness to share data' and specific examples of data sharing for a specific purpose. Overall, willingness to share data doubled (to close to 90%) when a specific service was being offered. The potential consumer protection downside is that consumers may be inclined to "overlook" some security concerns that they hold.

Overall the results from the survey were broadly consistent with the findings of previous research for the midata programme which found that consumers had concerns around security and privacy issues but were interested in the services that data sharing could enable.

In addition, with general data issues, over a half of consumers did not know who to take a complaint to should something go wrong with their data. There was also little agreement on whether complaints would go to the cross-sector regulator or individual sector bodies, reflecting a wider problem for the regulatory system in dealing with data issues that cut across a number of consumer tasks.

Feedback on apps

The feedback on the apps was broadly positive with three fifths liking them and one fifth liking them "a great deal". Interestingly, three fifths of respondents also said the apps would provide useful lifestyle insights they wouldn't have had access to without the app.

¹The questions were sent to survey volunteers through survey monkey

To get the full benefits from releasing transactional data, and aside from the barriers described in the other sections of this document, it seems likely that consumers will need to be educated about the benefits that accessing and using personal data can bring, and reassured about data security.

Having established the five different applications, we turned our attention to engaging the mIL's data-donating consumers for feedback. We wanted to hear views on the applications themselves, what consumers thought of the broader opportunity and what their reactions were to the effort required to access the data needed to drive the applications. We also wanted to understand what risks concerned them. In short we wanted to know what our consumers thought about the 'value exchange'.

A group of our consumer-facing expert partners built a survey for each of the applications. The survey asked a set of generic questions pertinent to all five applications (including questions aimed at understanding their view about the benefits and risks of personal data services generally) plus specific questions about specific applications - what particularly concerns them? The survey responses have been collated, analysed and summarised in this report.

Convenience

The feedback strongly suggests people prefer apps that minimize data entry, being concerned about the time and effort to input data. To maximize take-up, **apps will need to connect to or use data automatically**. This direction would be good for the consumer, and good for the ecosystem as it reduces the proliferation of copies of data and subsequent security and data misalignment risks.

“I'm overwhelmed by the time it would take to bring it to a valuable level.”

“Auto fill-in functionality for as many services as possible - reducing time and effort to use.”

“I would prefer this to be automated. Inputting is only as good as the data I put in. Data inputting is dull so I'm unlikely to do it regularly enough to get the best value.”

Customer segments

Feedback on the Energy, Finance and Health apps in particular show that applications will work well for some people and not for others. Feedback ranged from the particular app being felt to be intrusive, through to others believing it to be excellent and relevant to their actual situation. The lesson is that **we shouldn't try to satisfy all of the people all of the time**, not be afraid to develop data services just because each one may not be for everyone.

“It felt a bit too intrusive” and “I wasn't happy giving my account numbers.”

“I would not trust the App with the data requested e.g. where I spent my money. This is too intrusive.”

“It offers ideas for Energy Support that aren't openly available and makes me aware that there are offers available that I am eligible for, without too much hassle.”

“For someone less able than the norm to manage that sort of complexity this app would be a massive benefit.”

“Relevant information collected in one hub.”

Trust and branding

In trust, and who to trust, both **brand reputation and the context are important**. Consumers want to know what is being done with their data, and to be confident that the data is only used specifically for the application. Some people would trust the health app more if it was government backed. Others wouldn't trust apps if government was involved.

BBC

“The BBC was a Founding Partner of mIL and led the Social Good strand as it fitted well with our Public Purposes, enabling us to share best practice with other leaders in this space, from the potential that resides within personal data to the importance of security and transparency. The BBC is committed to a more personal relationship with its audiences in the future, and initiatives like mIL help us explore the value we can return to the public through our products and services.”

“Clear explanation of how data will be handled and which companies/groups are or are not signed up.”

“Only the information necessary to complete the task I need.”

“The organisation is one with which I already have a well established and trusted relationship with. The organisations is of sufficient size that loss & security would be adequately handled.”

“Yes, if it's only being used for that, and not retained.”

“It all depends on the situation and the provider. I want to control my personal information.”

Value

The clearer the benefit the more people will share data. Most respondees said that they would give the data where the benefit was clear and where the app made it clear what it was being used for. This shows that focusing on benefit and value exchange will be important to drive awareness and interest. The House Move app wasn't the most exciting but its benefit was clear. In fact, where they could see the benefit (e.g. in Relative Calm), people suggested even more items of data that should be used.

“It all depends on how easy it is to provide the data, how useful the output is and how safely I feel the data is being managed.”

“Healthchecks cost around £600 per year and give you the information above from a 2 hour health assessment. This is very expensive which most people could not afford unless they have good health insurance. To be able to have this information at your finger tips without having to pay these crazy fees would be fantastic.”

“Great app for students, social housing and renting where moves every year or six months are the norm.”

“I have found nowhere else that gives me advice about my entire financial picture and then helps me make decisions.”

“I'd be happy to share all data if it meant a more comfortable, secure lifestyle for an elderly relative.”

Consumer priorities

Feedback on the Mi Move app particularly showed that potential **switching benefit is less interesting to people than lifestyle or time saving benefits**. This can be used as a win-win message opportunity for midata as non-switching messages will not disengage business or those consumers who do not value the perceived time and effort required to switch.

“Think the service offered is invaluable - think any follow on benefits might be less valuable.”

Choice and control

People want choice and control. **Apps that give choice and control and a context for data entry are more likely to be used** than requests to input into a personal data store for an unspecified future benefit.

“Would be very concerned about sharing my data with a third party such as a PDS.”

“Yes, if it's only being used for that, and not retained.”

“I have concerns about centralising my data with a 3rd party PDS company.”

“Make it clearer what data is being used, and who the company is.”

“I would not do this unless it was under my choice and control.”

“If my data stays with me, I am more likely to use it.”

Importance of public sector data

There was feedback, sometimes direct, sometimes implied, that the **inclusion of personal data held Government would be a significant benefit**. There was very little concern that having access to data that government already holds would be a risk rather than a benefit to service innovation.

“If the NHS let me have my Community Health Index number and medical record, I could do lots more self-management.”

“This feels like a natural evolution for the NHS - expanding to encompass a digital channel.”

“I would be more inclined to use it if it was free and government backed.”

Consumer protection

Privacy and misuse remains an issue even for people who can see the benefits of digital data-driven services.

“There is no scheme or sanction to stop my data being mistreated. It gets sold behind our backs. Researchers also may misuse it for personal gain.”

“Would need upfront explanation of how this data would be kept safe.”

“Can't trust what the data will be used for in future.”

Mydex

“As a community interest company committed to the social purpose of helping individuals realise the value of their own data, it made sense to join the midata Innovation Lab.

We learned a lot about the potential of blending open and personal data digital technologies, and from the opportunity to work closely with forward-thinking commercial companies. This helped us develop a deeper understanding of the business case for personal data stores.

The mIL was also very valuable for the way it demonstrated the value of combining data from both public service and private enterprises to enable citizens to access the services they need. It highlights the way new midata-enabled services can provide consumers with useful, convenient services that create a social good *and also* enhance consumer protection and security.”

Cognesia

“We have learned a lot from the process and should be releasing our app in 2014. We will be happy to share it with you when it is released.”

“Need assurance my data would be secure and not sold to anyone for marketing purposes.”

“I also lacked confidence, not knowing where the data is being stored and where it was going.”

The consumer empowerment opportunity

The midata programme and the mIL contribute to bigger, broader trends in consumer empowerment. At the heart of these trends is the emergence of tools, apps and services that help individuals:

- Gather and use information as a tool to help them achieve their own goals and purposes.
- Collect and manage their own data under their own control, making the individual the point of integration of their own data.

Empowering individuals with their own data opens up the opportunity to create a wide range of new services that work on behalf of individuals. By combining information about themselves together with information about ‘the world out there’ individuals can use these services to make better decisions, implement these decisions and organise and manage their lives better.

This requires innovation at many levels: technology, tools and infrastructure; service designs and user interfaces; value propositions; terms and conditions and the business models to support them. It also requires the skills and services of multiple professions: IT, marketing, legal, financial and so on.

The growth opportunity affects the economy in two different ways.

- 1 direct effects of service innovation, bringing new services to market, helping organisations build their businesses and differentiate their brands while potentially creating new jobs and tax revenues.
- 2 indirect effects on markets and the economy as consumers’ ability to make decisions and interact more proactively with companies encourages competition around quality, service and price.

By enabling the release of data back to the individual, midata provides the ‘fuel’ that creates an opportunity for all these opportunities to be seized. That is why we call it a platform for innovation and growth.

A *sine qua non* of these opportunities being realised is data safety, not just in the narrow sense of security against hackers but also protection from the many ways data can be misused. Part of the answer here is new privacy enhancing technologies including services such as personal data stores that help individuals manage their own data and assert more control over what data is accessed, who it is shared with, and for what purposes. Part of it is the development of appropriate common practices, standards, rules and regulations - the creation of a new data climate where confidence in data sharing and user replaces suspicion and mistrust.

“By combining information about themselves with information about ‘the world out there’ new information services can help individuals make better decisions, implement these decisions better, and organise and manage their lives better.”

GfK

“Participation in the mIL has been a fantastic opportunity to work side by side with leading UK brands and personal data subject matter experts. As part of the Consumer strand we were able to help kick-start consumer clinics and frame the ideas that would make midata exciting for UK consumers.

A compelling value exchange that respects consumers as individuals and gives them tangible cutting edge benefits upfront will be the key to success as the midata initiative goes live in the public domain.

The market research industry stands to benefit directly from the new personal data ecosystem that is emerging. midata will be the catalyst for this taking hold in the UK, and GfK intend to be part of this important development.”

Aimia

“Aimia are a founding mIL partner because the project sits well with our data values of transparency, added value, control and trust. We believe that customers must feel that they are getting value from their data and that they must be confident in the security protecting their data. The mIL enabled us to make connections with other organisations across many different sectors that have a similar philosophy and to explore ideas for providing added value for consumers.”

The business opportunities

Getting businesses, government, technical experts, entrepreneurs, consumer bodies and consumers to work together to identify the business opportunity that sits at the heart of the midata Innovation Lab. The top line answer is that it is a multifaceted opportunity that few consumer-facing brands can afford to ignore.

It offers the opportunity to:

- 1 Create new consumer value propositions, products, services and relationships
- 2 Create new and replacement revenue streams
- 3 Build trust and brand reputations
- 4 Create efficiencies through the way that the different assets are organised to deliver these new services and revenues streams. (As we saw in the case of the energy app, it could save energy companies large sums of money by streamlining processes that currently very wasteful.)

The demonstrator apps created in the mL use data sets that are integrated around the individual. This creates the opportunity for new types of competition across industry sectors. For example, if a credit card company becomes your money manager it's no longer competing against other credit card companies but with life management service providers and other financial services providers including the financial advisor market.

The question still stands however: do these new services create value growth or value displacement? The mL wasn't set up to answer this question. But nevertheless it highlighted some big prizes: a potential explosion in the number, range and types of new consumer services, the position of trust they build with consumers, and the data access and use that follows from this trust.

A part of the answer

midata and the mL enables organisations to join with peers to find the answers to the key questions about how this market is developing. This puts them ahead of the curve - and their competitors. For some this will also provide opportunities as providers of infrastructure and enabling services and products.

The midata Business opportunity in context

midata sits within the context of multiple opportunities for our society and economy:

- the opportunity for growth in the digital economy (which is being targeted by many countries in the global race for economic stability and success)
- the ubiquity and availability of data both inside and outside organisations
- creating tools for consumers that enable better decisions and life management
- increasing expectations of transparency in the use of data
- technology that enables the data to move and be used
- related legislative and regulatory environment that enables consumers and businesses to benefit.

How does midata fit into the digital economy?

To understand the business opportunity that midata enables, it has to be seen in the context of the broader personal data market and, beyond that, the broader digital economy. midata asks for the release of personal transaction data to the individual. This data is obviously only a subset of the growing array of personal data generated today. In turn, personal data is a subset of the broader data market, both of which are a platform for

Allfiled

“Consumer empowerment through the effective management of personal data is at the heart of everything we do at Allfiled. When the opportunity arose to contribute our thoughts, capabilities, and technology to help explore this area together with a group of forward thinking partners, it was something we just couldn't resist.

The mL has enabled us to share ideas and build services that take the concept of open data and make it real, even if only in a small way at this stage. Allfiled already provide the personal data platform behind Moneysavingexpert.com's highly successful Cheap Energy Club and so we are lucky enough to see the power of personalisation and the benefits it can bring to consumers on a daily basis. It is this power of personalisation and personal data enablement that we now want to share with many more companies and individuals.”

growth in the digital economy. Supporting this growth in data use is trust: trust in the way the data use, who uses it and gets access to it, when and for what purpose.

Consumer empowerment and trust

Trust plays a pivotal role in the growth of the digital economy. Without trust, data will not flow and consumers will increasingly limit access to their data, using the growing array of tools in their hands to do so. This poses a real and growing risk to the growth of any digital economy. With trust, consumers will actively participate, enable their data to be used, volunteering additional data, thereby enabling and enriching the use of a growing range of digital services. In this way, trust, technology and business innovation all advance hand-in-hand - all of them fuelled by the personal data made available by midata.

What role does midata play?

Our experience in the mIL suggests midata can play an important role in the development of the UK digital economy. It provides a focus for the collaboration required to create the trust that is needed to grow the digital economy at pace, for the UK to compete in the race between economies to seize the commercial and social opportunities that personal data and data more broadly enables.

Like any opportunity, the digital economy will grow without explicit collaboration. But, to grow at pace it requires a number of different stakeholders to collaborate: businesses, legal (government/ regulators / implementers), technical and entrepreneurs, and consumers.

A trusted ecosystem

Only if all these parties are involved can we create a trusted ecosystem in which data and therefore benefits can flow. Empowering consumers with their data, in this case with midata enabled data, enables organisations to bring the consumer into the economic structure of the digital economy. In doing so, it creates a competitive environment where consumers are more empowered to assert their needs within a fast moving economy.

How consumers play an active role in the digital economy is yet to be seen. But one thing is certain. Trust and confidence play a central role to leverage participation, data sharing and value creation. This is a new form of collaboration, which is becoming increasingly urgent as consumers become increasingly aware of the use and value of their data and more engaged in the use of digital tools to help make decisions and manage their lives.

Manning Gottlieb

“The biggest learning to date is that technology has created the potential reward from personal data but this change can only be realised by individuals actively wanting to participate. We want to understand what the catalysts will be for individuals to participate in the midata arena in order to be able to shape marketing and communication approaches based on successful triggers.

We are still in the early stages of the changes that personal data are set to create and the scope of the opportunity is not universally recognised yet. It is, therefore, fantastic to join other organisations in the midata Innovation Lab to share our insights and accelerate our learning together.

The value of personal data

Marketing is fuelled by understanding consumers. As an industry we have become increasingly ingenious in finding ways of tracking and recording consumer behaviour both on and offline. As consumers become more aware of the value of personal data and expect greater recognition of their contribution there is the potential for considerable change in the current model.

Manning Gottlieb OMD joined the midata Innovation Lab in order to understand how individuals are responding to the changing personal data landscape and where the big opportunities and challenges lie for businesses looking to communicate to consumers. If we can understand how we need to adapt we have the chance to create more creative and efficient campaigns for our clients and greater success for the agency.”

GfK

“GfK recognise that consumers want to have better control of the data that defines the relationship that they have with brands and institutions. It helps them to make more informed decisions and manage their lives better in an increasingly complex digital world. midata represents the will of government and key industry players in the UK to make this happen.

Effective management of personal data has the potential to create new business models that are customer centric and in alignment with the structure and values of the digital economy. Through the research that we do with consumers and leading brands in the technology sector we have a glimpse of the future, and through this we believe that the big data phenomenon, and how we empower consumers as part of this, could determine the future structure and success of entire industries.

Through our involvement in the mIL we have learned that there is a growing consensus amongst leading brands in the UK that the data relationship between consumer and brands needs to be redefined. Adding value to existing products and services through better access to data can be a win-win-win for consumers, brands and public enterprise. There is growing evidence to show that this can be done for the greater good. Society can benefit directly from these efforts.”

Summary and conclusion

The midata Innovation Lab was set up to inspire stakeholders in the emerging personal information economy and help them find some of the answers. It succeeded in this. But lots more needs to be done.

The mIL has shown that placed in the right environment, industry can collaborate with Government, regulators and consumer bodies to find answers together better than they can do via traditional legislative/consultative processes.

The mIL has demonstrated that midata does indeed create an innovation opportunity. Companies involved in the mIL are wanting to develop its apps further and in some cases take them to market.

There is a genuine opportunity for new value creation in this midata-enabled space. The message to other consumer-facing companies is 'Don't get left behind.'

For consumers, there is real demand for services enabled by their data. Consumer responses to app prototypes in the lab also show that trust (will my data be safe?) and convenience (as little as possible data handling) are critical to consumer take-up.

Many services need the input of personal data currently held by government bodies: their involvement in the overall midata initiative is important. Making this data available gives business an incentive to innovate - it's a resource they've never had access to before.

Communication about midata and related services should talk about the value exchange not the value of data. In many peoples' minds data is associated with risk and is often hard to understand. Use cases that explain a service's value can be exciting and engage consumers much more effectively.

The business, legal and technical aspects of new services all need to be developed iteratively and in tandem. They are interdependent and they all need to be addressed rigorously, in a coordinated way.

Some services can be created simply by consumers giving services permission to access data rather than move and copy data. Other services need data release. When data is moved, it causes consumers to worry about data security. This is less of an issue if the data is simply accessed and only accessed temporarily when permissioned by an application the consumer is involved with. midata-enabled services will probably need a mix of both approaches, with appropriate communication and data protection safeguards attached.

“The mIL has shown that midata does indeed create an innovation opportunity.

There is a genuine opportunity for new value creation in the midata-enabled space. The message to other consumer facing companies is ‘don't get left behind’.”

About this report

This report has been compiled by BIS and Ctrl-Shift with input from the midata Innovation Lab partners.



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