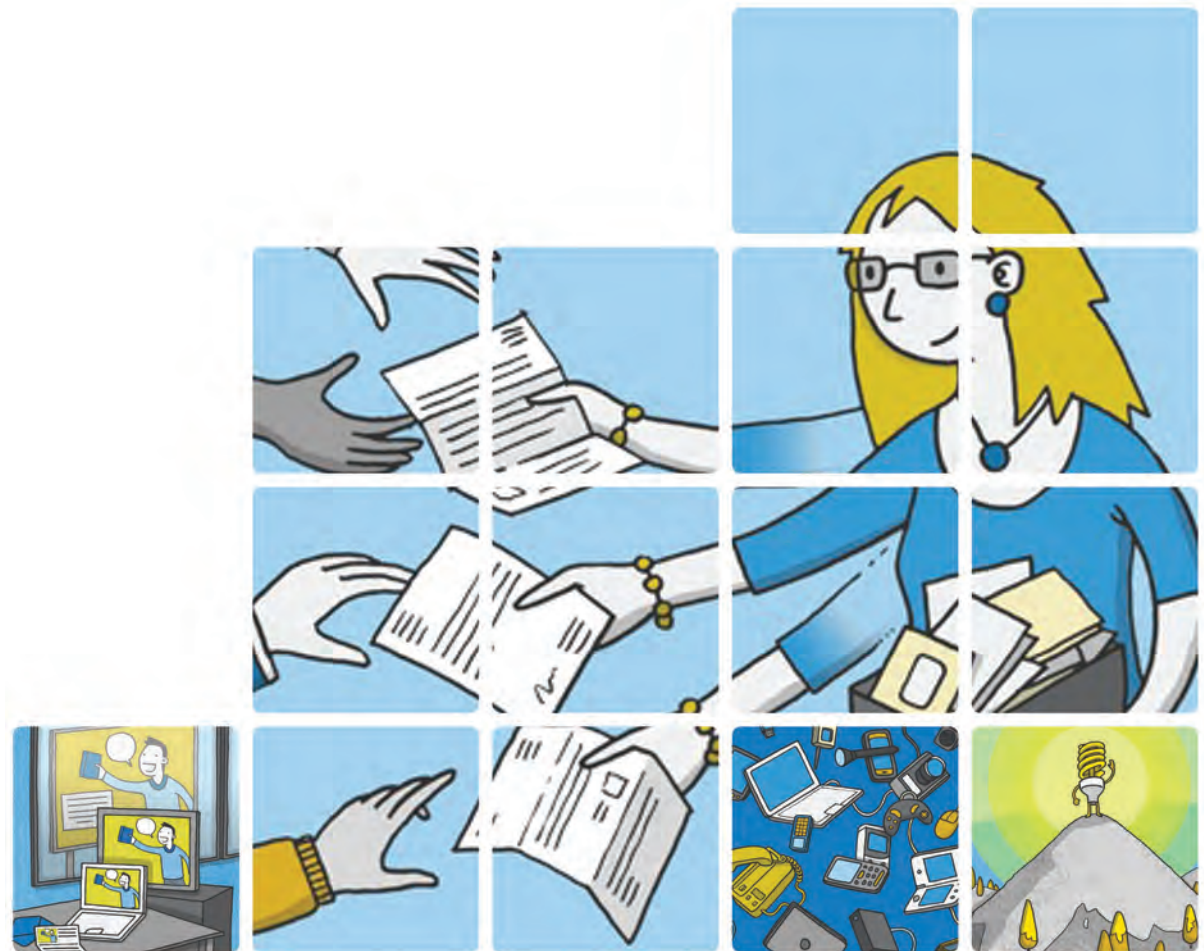


The new personal data landscape

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Introduction

In April 2011, the UK Government announced its ‘midata’ project to encourage organisations holding customer data to release this data back to their customers in a portable, machine-readable and reusable form. In November 2011, the Government announced the first phase of ‘midata’ implementation. Within two to three years, all organisations and companies holding customer data in the UK will be involved in releasing their data back to their customers. This Briefing Paper explores the broader context of ‘midata’ and its implications for organisations.

A fundamental shift in the way personal data is managed has begun: from a world where organisations gather, collect and use information about their customers for their own purposes, to one where individuals manage their own information for their own purposes - and share some of this information with providers for joint benefit.

“

‘midata’ is about putting customers in charge: in charge of their own personal data which can be used to inform their purchasing decisions and lifestyle choices. ”

Edward Davey, MP

Minister for Employment Relations,
Consumer and Postal Affairs.

Ctrl-Shift are working as advisors to the Department of Business as members of the ‘midata’ Project Board.

- **Part 1** reviews the key drivers - regulatory, economic/ commercial, technological and social - forging the new personal data landscape.
- **Part 2** looks at the trend towards individuals managing their own data. For organisations this is a classic ‘left field’ disruption. It’s happening mostly beyond the radar of organisations’ existing concerns and systems but nevertheless changing the environment in which they operate, including customer behaviours and expectations.
- **Part 3** looks at the new markets for Personal Information Management Services (PIMS) that these developments are creating.
- **Part 4** analyses the challenges and opportunities for organisations: how best to respond?

Key conclusions

This report identifies a collection of trends that are transforming the personal data landscape. Key recommendations for organisations are:

Mega-trend: A new information sharing relationship with customers

- **Build trust:** what's needed to go beyond today's privacy policies to enable confident information sharing by customers?
- **Build new information sharing mechanisms** to enable safe, easy and efficient data sharing
- **Value focus:** identify how and where greater information sharing with customers can generate new value for both customers and company.

Mega-trend: The emerging market for Personal Information Management Services

- Monitor development of new markets for personal data management services, life management services, and decision support services.
- Identify market entry opportunities/ threats of disintermediation

'Component trends'

1: The new market for ID assurance provision

Monitor timelines. Identify opportunities to enter the ID Assurance market and/or use new identity services to reduce costs and risk in customer-facing processes.

2: Information as a tool in the hands of the individual

Review information and research currently held by the organisation for internal purposes with a view to repurposing it as a 'value add' for customer.

3: Releasing data back to customers

Track progress of midata project. Join and take vanguard role if doing so offers competitive advantage

4: The rise of 'personal informatics'

Monitor market development. Consider new services that help customers collect information about their own lives and/or develop permission-based information sharing relationships with providers of similar services.

5: P2P information sharing

Identify opportunities to develop structured information sharing with customers.

6: Volunteering 'information from my head'

Conduct VPI (Volunteered Personal Information) readiness audit and develop VPI strategy.

“
Creating data sharing relationships with customers is a new opportunity for competitive advantage. The challenge for organisations is to evolve existing systems, policies and strategies - built for a time when they collected data about their customers - to this new mode of win-win data sharing.

”

Part 1: The personal data ‘control shift’

For the last 50 years, technological advances have provided organisations with a growing array of tools and services to gather, store, analyse and use information about their customers. These developments have created an organisation-centric data environment, where organisations are the managers and users of customer data, and customers are relegated to the role of passive ‘subject’ and target of organisations’ data-driven activities.

Now, however, continuing technological advance is taking us to a new tipping point: the costs of gathering, storing and sharing information have fallen so far that information management tools and services are now being made available to individuals - who can now join ‘the information management party’. This is creating the two defining features of the new personal data landscape.

1. Information as a tool in the hands of the individual

Individuals are becoming managers of information in their own right, gathering and using information to pursue their own purposes, under their own control. A new sector of personal information management services (PIMS) is emerging to capitalise on this opportunity, offering tools and services to help individuals make better decisions, manage information-based tasks more efficiently, and organise and manage their lives better. These new services are competing with established brands, services and channels for individuals’ trust, time, money, attention and information.

2. The individual as the point of data integration.

In the era of organisation-centric information management, each organisation collected its own set of data about each customer. In such an environment, information about each individual is dispersed across hundreds of different organisations - none of which can see a full picture of that individual.

As individuals become managers of their own information they are becoming the natural point of integration of data about them. For example, most individuals have accounts with a range of different banks, building societies, credit card and other providers. As data managers in their own right, they can aggregate this information to create a fuller, rounder picture of their financial affairs. This is resulting in the creation of new sets of data of enormous personal, social and economic value.

These changes are happening outside of organisations’ systems, technologies and control. At the same time however, they are transforming the environment in which organisations do business.

“

Two trends - individuals managing and using information as a tool in their own hands, and individuals as the point of integration of information about their own lives - are transforming the personal data landscape.

”

Drivers accelerating the control shift

A wide range of legal, regulatory technological, commercial, and consumer trends are driving the control shift in the UK and internationally.

Political, legal, regulatory

In the last UK General Election, both major parties made manifesto commitments to increase individuals' ability to manage and control their own personal data. Recent steps towards personal information empowerment include:

- **midata**

The UK Government announced its 'midata' initiative to encourage organisations holding data about their customers to release this data back to the individual in a secure, portable way - so that individuals can use this data for their own purposes. The US Government has a similar programme called Smart Disclosure.

- **The House of Commons Public Administration Select Committee** has endorsed the need to experiment with services that help "citizens maintain their own personal data".¹

- **Federated Authentication ID Assurance strategy**

The UK Government has announced an initiative to reinvent the way identity assurance is handled, from today's organisation-centric approach to a more person-centric approach.

¹ "Moving to a model where the citizen maintains their own personal data with an independent, trusted provider and then can choose whether to authorise the sharing of that information with other organisations is an ambitious vision that will need to be trialled extensively." House of Commons Public Administration Select Committee's report on Government's use of IT

- **NSTIC**

The US Government has announced its National Strategy for Trusted Identities in Cyberspace (NSTIC) to create a "vibrant marketplace that allows people to choose among multiple identity providers - both private and public - that would issue trusted credentials that prove identity."

- The US Government's **Blue Button** initiative releases medical records back to US Army veterans.

- **Concerted pressure** in the US and Europe in favour of Do Not Track services.

- The **European e-privacy directive**, requiring prior consent for organisations to place cookies in users' terminals.

- The review of European Data Protection Legislation which is seeking to align regulations with the realities of the internet.

Public opinion

The UK's Information Commissioner conducts regular research into the public's awareness of personal data issues, and attitudes towards them. Multiple data breaches and leaks mean that how organisations manage personal data is now consumers' second biggest concern - behind crime.

- According to the ICO, less than half of individuals (49%) think that organisations handle the information they collect about them in "a fair and proper way".
- 59% feel they have "lost control over the way their information is collected and processed".
- Consumers are also much more aware of their rights. Over the last five years, there has been a 50% jump (from 42% to 66%) of individuals knowing they have a right to see their information. (ICO research)
- Ctrl-Shift's Consumer Empowerment Tracker research in April 2011 found that nine out of ten consumers agree with the statement "I should be able to control what information organisations collect about me and what they use this information for."
- 73% agreed with the statement "I believe my personal data has commercial value and that organisations should pay me a fee for using it".
- Research by Mydex earlier this year found equally strong support for the statement: "The control of personal information is an issue that needs to be addressed urgently"

Drivers accelerating the control shift: continued

Technology

In the early 1960s the US Air Force bought a computer - the IBM AN/FSQ-7. It weighed three hundred tons, took up twenty thousand feet of floor space and took eighteen large trucks to deliver. Today, individuals hold far more processing power than the IBM AN/FSQ-7 in their laptops and smart phones: information processing power as multiplied a million fold since the 1970s.

If the cost of making things had fallen as fast as the cost of processing information over the last few decades, a Rolls Royce would now cost less than £1. What was once affordable only to the largest organisations is now accessible to private individuals.

Information flows are being transformed along with information processing costs. 'Web 2.0' has given the consumer voice as well as choice. According to IDC, the amounts of information flowing 'upwards' from individuals to each other and to organisations outstripped the amount of information organisations sent 'downwards' from the organisation to individuals in 2011.

Meanwhile, new technologies to enable permission-driven information sharing between parties, including individuals, are emerging fast. For example:

- **OAuth** is an open standard for authorization which allows users to share private resources (e.g. photos, contact lists) stored on one site with another site without having to hand out credentials such as a username or password. Instead it uses tokens guaranteed by a service provider.
- **Nigori** is a protocol developed by Google "for storing secrets in the cloud such that the storage need not be trusted and only a single password is required to access secrets". (Technologies like this are essential for mass-scale operation of personal data stores).
- **User Managed Access** is a specification that lets individuals control the authorisation of data sharing and service access made between online services on the individual's behalf, and to facilitate interoperable implementations of these specifications.

Separately and together developments such as these are creating the infrastructure that makes personal control of personal data sharing possible.

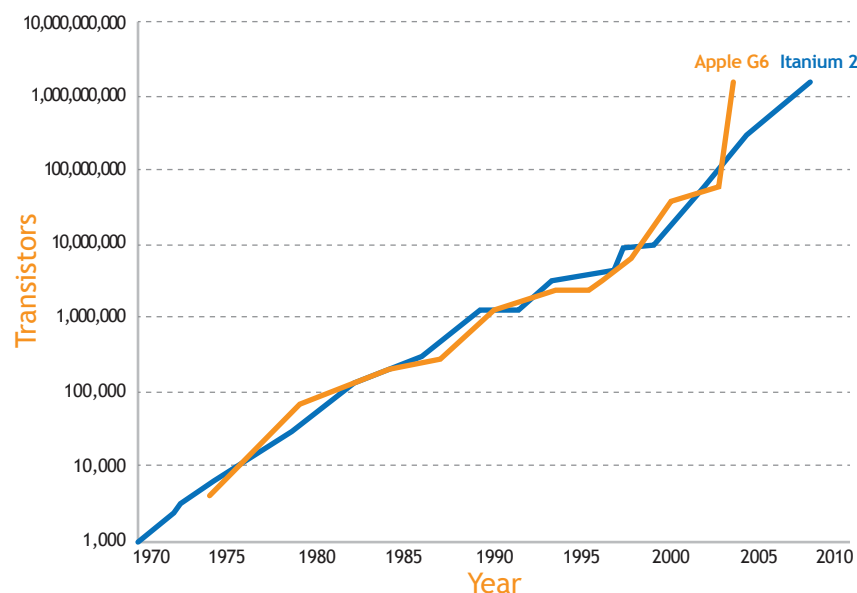


Figure 1: An exponential rise in computing power is democratising the uses of information.

Source: Professor Nigel Shadbolt FREng, Head of Web and Internet Science Group, University of Southampton

Drivers accelerating the control shift: continued

Commercial

A growing number of companies are realising that a) there is money to be made from providing individuals with services that help them protect their privacy, store their data safely, share it in ways they can control, and use it for their own personal purposes and b) that giving individuals more control over their data is necessary to build trust, which is vital if consumers are to be willing to share their information with organisations.

- The World Economic Forum is calling personal data a 'new asset class': "a valuable resource for the 21st century that will touch all aspects of society".² Its special report for Davos 2011 noted that "Increasing the control that individuals have over the manner in which their personal data is collected, managed and shared will spur a host of new services and applications ... generating a new wave of opportunity for economic and societal value creation." It is extending its work for a new report due for publication at Davos in early 2012.

- Telefonica, owner of O2, is introducing a UK trial offering customers full control over how their personal details can be used in activities such as marketing and financial services.
- Forrester has identified personal data management as "creating a major shift in how marketers access and use customer data" where "organisations need to provide more granular controls over the data a consumer is willing to share". It expects "aggressive acquisition attempts for startups" which help individuals manage their data better.
- A range of new companies such as Mydex and Paoga (UK), Qiy (Holland), Personal, Connect.me and Singly (US), TrustFabric (South Africa), MyInfoSafe (New Zealand) have been set up to address the opportunity of data services working on individuals' behalf.
- Large organisations are recognising the potential commercial value of increased digital information sharing with customers. This has led the Kantara initiative to establish a special working party to develop common standards for user managed access and 'information sharing agreements' between individuals and organisations.

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A growing number of companies are realising there is money to be made from helping individuals protect, control and manage the information they need to manage their lives.

”

² World Economic Forum, 2011 Personal Data: The Emergence of a New Asset Class

Part 2: Individuals as data managers

The phrase ‘the individual as data manager’ slips off the tongue easily. But what does it mean? Peel away the surface and underneath is a rich collection of data sources, uses and activities.

Figure 2 below identifies multiple streams of information and activity that are driving the rise of ‘individual as managers of their own data’. In this Part, we look at each of these different data sources and uses of data in turn.

They include:

- Identity management, verifying claims, attributes and reputation
- General information as a tool in the hands of the individual e.g. information about what is available on the market
- Personal data handbacks: data collected by organisations about individuals activities and behaviours and then released back to the individual
- Personal informatics - data collected by individuals about aspects of their lives
- Peer to peer information sharing - information collected from other people
- Information ‘from my head’: plans, intentions, priorities, goals, etc

New personal data management services are emerging to help individuals collect, collate, combine and use these different streams of information to manage their lives better. The more sophisticated individuals become as data managers, and the more empowered they are with supporting tools and services, the greater the incentive for organisations to develop new types of information sharing relationships with their customers.

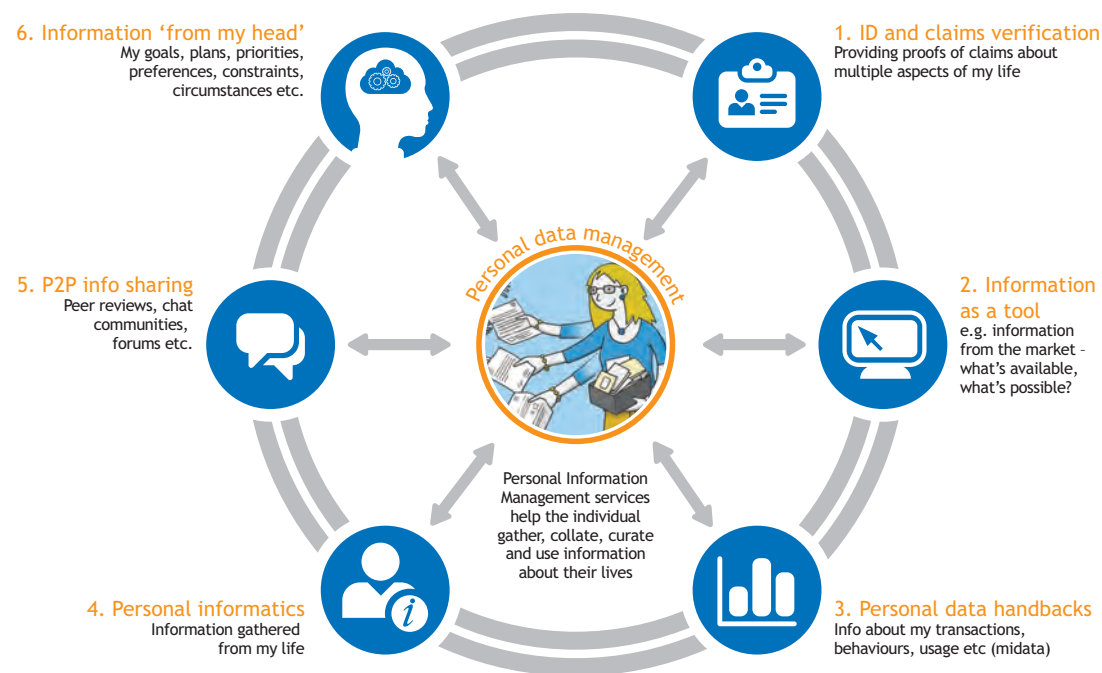


Figure 2: The individual as data manager: in a digital world individuals are integrating many different streams of different types of data in order to manage their lives better. This is triggering a sea change in how personal data is collected, managed and used in our society.



1. Identity and claims verification

Providing proofs of claims about multiple aspects of my life

To do business in an online world, individuals have to be able to prove they are who they say they are. Our current solution to this problem is organisation-centric: each organisation establishes its own processes and criteria for solving the identity problem - leaving individuals drowning under a sea of different password, log-in procedures etc.

Now the UK Government's Identity Assurance Programme is developing a new approach where competing accredited identity service providers provide individuals with 'portable' identities they can take from organisation to organisation.

Secure, encrypted, reusable electronic tokens of identity will be used to speed up online transactions while reducing costs and risks of fraud. But proof of identity is just one of many ways that individuals need to verify claims when dealing with organisations. Other examples include:

- I have a current passport
- I am a qualified HGV driver (+ all other formal qualifications)
- I have passed my maths GCSE (+ all other educational qualifications)
- I am entitled to disability benefit (+ all other benefits and entitlements)

- I have valid, up-to-date car insurance (+ all other insurances)
- I have an up-to-date CRB check
- My credit reference rating is ...

Over the coming years, individuals will build up large 'libraries' of secure, date-stamped, non-tamperable electronic tokens of verification which they use routinely to streamline their dealings with organisations and to help manage their online reputations. This shift from organisation-centric to person-centric identity management is a critical building block of personal data empowerment - and information sharing efficiency.

UK Government Identity Assurance Programme

The UK Government wants to establish a decentralised market of competing private sector identity providers, each of which provides an identity assurance service so that individuals can prove who they say they are when dealing with organisations. This market for 'verified attributes' can extend almost indefinitely, creating a new type of information trade between individuals and organisations. For more information, see Ctrl-Shift's ID assurance Briefing Paper.

Noddle

Traditionally, organisations have shared data about individuals'



creditworthiness between each other 'behind consumers' backs'. Callcredit's new service Noddle gives individuals free access to their current credit rating.

Individuals can see all the information which has been compiled about them to complete their credit rating and they can use this rating to pre-screen applications for services based on a 'likelihood index' of whether they will be accepted based on their credit worthiness. They can then assess and apply for the most suitable deal for them - from loans to purchasing credit cards.

An obvious next step is for individuals to use their Noddle credit rating as a form of verification when interacting or purchasing from other organisations, such as applying for a CRB check or buying a car. In this way, Noddle points to a world where individuals manage their reputations and 'trade' in verified claims about themselves.



2. Information as tool in my hands

Information from the market.

What's available? What's possible?

Individuals don't only gather and use personal information - they also have a voracious appetite for information about 'the world out there' including available products and services.

The last decade has seen an explosion of services that help individuals find, access and use these sorts of information. Online search and comparison sites are two obvious examples. These services have already transformed consumer behaviour in key ways. For example, in December 2009, 81% of individuals looking for home insurance quotes and 89% seeking motor insurance used a price comparison site.³

But general information about 'what's out there' has only limited value. What we want is the information that's relevant to our particular needs and circumstances, and the task in hand. This is creating a drive towards increased personalisation and customisation - where individuals specify in more detail the information they want by inputting more details about who they are and what they are trying to do.

In this way traditional 'top down' publishing processes (i.e. making information available on the Internet) are merging with 'bottom up' specifications from individuals - with added value generated by increased data sharing between individuals and service providers.

Online Search

Online search is now such a ubiquitous, everyday activity it's easy to forget that it's only really ten years old. It's also easy to overlook how revolutionary search is in terms of the economics of information use.

Information has a unique attribute: you only know its value once you have 'consumed' it. For example, you don't know if a film is good or not until you have seen it.

For millennia, information was provided via a 'publishing' mode where, to find the information we wanted/needed, we had to sift through vast amounts of information that didn't fit the bill. By letting individuals specify what they are interested in, search strips out huge amounts of wasted time and effort.

At the same time, it turns the process upside down: instead of being driven by publishers (who choose what information to provide) it is driven by users (who specify what value looks like to them). Massive efficiency is gained by putting users in the driving seat: in this sense, search captures the essence of the emerging data landscape.

³ Consumer Intelligence: The Use of Price Comparison Sites in the UK General Insurance Market, 2 May 2010

Comparisons

In the UK, 86% of consumers now go to a comparison site when buying car insurance. Services like this are popular because they help people access useful information in a fraction of the time it took to do research when all you had was pieces of paper. They can make better decisions, quicker and easier.

But 'pure' price comparisons are limited. What's the point of choosing a cheaper price if the quality is poor or the service is awful. To add real value, needs information from other sources such as peer reviews. That's what lies behind the recent tie-up between Reevo and Kelkoo.

Also, there are two ways of doing comparisons. One is to focus on products and their attributes, and to let people sift through the data. This can become time-consuming and hasslesome. The other is to help people specify what they are looking for, and then to show only the comparisons that fit the specification.

This is where the comparison market is heading: crystallising inputs of data from many different sources around the decision-making priorities of individuals.

It will become a new way of going to market - for both companies and their customers.



3. Personal Data Handbacks

Information about my transactions, usage and behaviours (midata)

Much of the information individuals could collect about their lives is currently dispersed across the hundreds of different organisations they do with business with. Information about their grocery purchases and habits sit with retailers, about their financial transactions sit with banks, about their energy consumption or mobile phone usage sit with their providers, and so on.

By encouraging companies to release the data they hold back to their customers, the UK Government's 'midata' initiative makes Individuals the point of integration about their own lives. In doing so, it is accelerating a new trend: the rise of individuals as curators of their own data assets.

The data sets will do a number of things that organisations' databases cannot:

1. integrate information about an individual's activities in a single area: if you have more than one credit card, your credit card data is dispersed across many different credit card providers. Now, with 'midata', data from different accounts can be brought together in one place - the individual's data store. This will create a genuine single view of the customer for the first time - not one limited by the organisational boundaries of the company collecting the data.

2. combine information across different activities with different suppliers to create an integrated perspective: for example, analysing purchases across many different suppliers to see 'how much I spend on presents'.

Blue Button

In the US, under its Blue Button initiative, The US Government has made medical records available to veterans, so that these individuals can take these records (in the form of a simple text file or pdf) to whatever medical advisors and services they wish. 'Blue Button' also enables Veterans to automatically connect to major pharmacies, lab systems and an increasing number of inpatient and outpatient electronic medical records systems.

Microsoft's HealthVault now uses 'Blue Button' capability enabling veterans to use this service, and Northrup Grumman have developed a 'Blue Button' application enabling veterans to remotely access MyHealthVet from an Android or iPhone.

Over 300,000 vets have downloaded their health records since August 2010, and the Government is currently running a competition to turn the downloads into fully fledged Personal Health Records linked to 25,000 doctors' surgeries.

3. combine information from suppliers with other sources of information to create new data sets. For example: connecting information about my energy consumption with the number of people in the household, when they are at home, and what appliances they use when at home. This makes it possible to generate comparisons and advice based on information about people really like you.

'midata'

'midata' is a UK Government initiative to encourage organisations holding large amounts of customer data to release this data back to these customers in a re-usable form so that they can use the information for their own purposes.

'midata' is presenting itself as 'a platform for innovation' of new personal information services that help individuals make better choices and decisions, and manage their lives more efficiently.

The first wave of companies to participate in the 'midata' initiative include British Gas, Callcredit, EDF, E-On, Google, Lloyds Bank, Mastercard, NPower, Royal Bank of Scotland, Scottish Power, Scottish and Southern, Three and Visa. The plan is to extend 'midata' to all companies currently holding customer data.



4. Personal Informatics

Information gathered by me, from my life

Historically, organisations have collected large amounts of data about their customers' behaviour, but individuals have collected very little information about their own behaviour. Now technology is making it easy, cheap and simple to collect all sorts of data about every aspect of our lives: how much exercise we do, our vital health metrics (heart rate, blood pressure, blood sugar), what we eat, how well we sleep, and so on.

The web site QuantifiedSelf.com lists over 550 different products on the market covering areas such as fitness, food, energy, health, lifestyle, money and productivity. It envisions a world where individuals deploy a range of devices to automatically track and analyse their day to day activities to create massive databases about their lives.

Another driver here is the rise of 'the Internet of things' and M2M (machine-to-machine' communications. While much of this data will be collected by organisations, some of it will also be collected and used by individuals.

As the Personal Data Ecosystem matures some of these tools will go mainstream. Individuals will share data garnered from their 'self-tracking' activities with suppliers, advisors, each other. PIMS will routinely crunch self-tracking data with other data streams to create new data driven services - and organisations will want to gain access to this data.

Fitbit

The Fitbit is a wireless tracker that users can wear on their wrist or clip to clothing to track their activity levels, sleep pattern, calorie intake, calories burned and time spent in a sedentary state.

When the user walks within 15ft of the base station (plugged into a pc or Mac), the data is automatically uploaded to the Fitbit website. Statistics are then presented in a dashboard style enabling users to set goals and compare with other members.

Energy monitoring

WattzOn is a web tool designed to help users achieve a greener and healthier lifestyle by collecting data about their home, commute, and other lifestyle factors and compare their carbon footprint with other households. It helps users monitor bills and fuel prices, and interprets the data to suggest where homes might be wasting energy.

TallyZoo

Tallyzoo, a service dedicated to self monitoring, allows users to measure anything from their caffeine intake to the number of times they cut their grass. Users collect data using a mobile device or website program which creates interactive flash-based graphs enabling them to spot trends and patterns in their consumption habits, work, health and fitness goals. Data is manipulated so that users can share statistics and compare the end results.

The success of Tallyzoo lies in its ability to capture data quickly and easily with an incremental timeline and colour-coded, one touch buttons. New buttons represent a new activity and increments and timeline can be adjusted to suit users' needs.

The service lets users create connections between different types of information. For example, they can examine hours worked against their happiness rating, or assess their fitness regime alongside productivity levels. ADHD and depression sufferers have found benefits with this style of self-monitoring; migraine sufferers have used it to discover connections between migraine attacks and food or alcohol consumption.



5. Peer-to-peer information sharing

Peer reviews, communities, forums etc

Many commentators see social media as the key to consumer empowerment because, “now, brands can’t control the messages that are sent about them and there is no longer any hiding place if they lie, cheat, dissemble or even make mistakes”.

This development is real, but the analysis is also rather myopic, judging significance narrowly in terms of a brand’s ability to get marketing messages through to target audiences. In fact, peer-to-peer is also a powerful source of new knowledge and new tools:

- Peer reviews are becoming a new way of judging the merits and success of products and services.
- Online reputation - what others say about you - is becoming an important personal asset that needs to be protected and managed, just as it is for organisations.
- ‘People like me’ services are now mainstream sources of insight and advice.
- Online forums and communities - especially if their knowledge is captured and codified via ‘problem solving communities’ - can be a powerful way of garnering and updating the collective knowledge and experience of a population.

A common trend driving all these services is the need to curate the information to make it more useful and more easily usable. This requires turning unstructured ‘chat’ into structured data.

Reevoo

Reevoo only collects product reviews from known purchases (via retailers). Its disciplined approach to seeking and analysing reviews means it now has a large and hugely powerful database on the strengths and weaknesses of thousands of products, as perceived by their user.

This database is growing increasingly sophisticated. For example, instead of simply saying ‘this TV was great’ or ‘this TV was awful’, TVs are rated across multiple criteria such as ease of installation, sound quality, picture quality, value for money etc.

Reviewers are also differentiated e.g. ‘multi-purpose viewer’, ‘sports fan’, ‘movie buff’.



e-Bay online reputations

A peer-to-peer communication environment makes ‘reputation management’ an important issue for individuals as well as companies: a good reputation means people trust you and will ‘do business’ with you.

eBay’s reputation tools are critical to its success. Buying online can be a risky proposition - having some way to assess the reputation reduces these risks. By letting buyers post their assessment of sellers, sellers are encouraged to behave in fair and honest ways.

It’s not all plain sailing. Problems arose with eBay’s systems when people receiving negative feedback retaliated with negative feedback of their own: eBay had to step in to stop reputational slanging matches breaking out.

There are, of course, weaknesses for both sellers and buyers within this system: what is to stop someone with a bad reputation from abandoning their virtual identity to set up shop under a new account? How can buyers distinguish between rogues starting over as new players and new users genuinely starting out?

Dilemmas such as these are driving the creation of a new market for ever more sophisticated online reputation management services.



6. Information from 'my head'

My goals, plans, priorities, preferences, constraints, circumstances

Every individual has a vast and rich store of knowledge and information about themselves which, most of the time, sits unused in their heads. This is mostly information that traditional gathering data techniques cannot reach, including:

- 'My circumstances': the context for the decisions I make and which define the constraints I work under. These include my income, marital status, job, where I live, whether I am a home owner, how many kids I have, my health, and so on.
- My changing preferences, purposes and priorities
- My future plans and intentions

Access to such data represents a 'holy grail' data to companies because it explains why people do what they do and predicts what they are going to do next.

However, this data cannot be accurately derived from traditional organisation-centric sources of data such as transactions and interactions. This leaves marketers reliant on proxies, inferences and predictive algorithms... which are often little more than educated guesswork.

In the emerging personal data ecosystem individuals will have the ability to both input this information into their own digital tools and services and to voluntarily share it with organisations in order to access more appropriate services and get things done.

Ctrl-Shift's research finds that the market for these new streams of information could grow to be worth £20bn in the UK over the next ten years.

Permission management services

A growing number of start-ups now believe there's money to be made - for themselves and for individuals - by selling permission-based information to companies.

Pure Profile helps individuals create profiles of themselves, their lifestyles and interests. PureProfile then sells these profiles to market researchers wanting to find people who fit their research profile. If the individual gives permission, it also lets advertisers send messages to people whose profiles match their target audiences.

Allow is an attempt to sell consumer 'permissions' to advertisers: permission to be contacted about specific products and services the individual has registered an interest in.

From sellers' perspective, services like this - which are driven by information volunteered by the individual (VPI) - could become highly efficient lead generation engines, helping them talk to the right people about the right things at the right time.

Both services promise to reward individuals for offering permission-based information.

In the long term, we expect many if not most interactions between individuals and suppliers to operate on this basis, with service providers competing keenly for individuals permissions and volunteered information.



Personal Data Management

Personal Data Management services help individuals gather, collate, curate, and use information about their lives

To maximise their potential individuals need to bring together and manage all six streams of data described in this section.

This points to the rise of new Personal Data Management Services - software, tools and online services - that help individuals manage the full gamut of information tasks such as: collect, store, access, sort, classify, tag, correct, update, link, verify, monitor, check, combine, copy, discard, authorise, give permission and share.

Personal Data Management lies at the heart of the new personal data ecosystem.

As personal data management services evolve, individuals will share increasing amounts of data with others - friends, family, advisors, service providers - on a mass scale. As this market evolves, personal data management will become increasingly sophisticated including:

- A shift from unstructured data (photos, chat) to structured data such as personal financial or health records
- Increasingly granular control over exactly what data is shared with who, for what purposes, under what terms.
- A growing range of tools and services that help individuals combine, analyse, visualise, manage and share increasing amounts of data easily.

Facebook and Google

Each of Facebook's 800 million users creates their own profile and their own 'Timeline' (a scrapbook history of their lives). Thus, Facebook is educating the population about the ins and outs of personal information management - particularly to think about what information they share with who.

Ongoing debates about Facebook's privacy settings are raising awareness of privacy and permissions issues. For example, in December 2009 it introduced - and then amended - a default privacy setting that made public users' name, profile picture, gender, current city, networks, Friends List, and all the pages they subscribe to.



Overall, the trend is towards increasingly granular control. For example, Google Circles allows individuals to specify which circle an individual is part of, and therefore what information they can see. We expect this trend towards granular control to continue, especially as individuals share increasing amounts of information for commercial and administrative purposes.

Personal Data Stores

The last year has seen a flurry of activity around the concept of personal data stores or personal data 'vaults' that help individuals collect and keep their own data safe, manage, analyse and use this data, and control how it is shared with other parties. Launches include Mydex and Paoga in the UK, Personal and Singly in the US, and Qiy in Holland. Many large corporates are working on their own personal data store initiatives.

Personal Data Management: Mydex

Mydex helps individuals collect, manage and share data under their control. Mydex is built to enable the sharing of structured data between individuals and organisations. A key part of its service to the individual is the options it creates for selective disclosure: letting the individual choose which data fields to share with which organisations, for what purposes, when.

Under the Mydex service, in order to gain access to the individual's data, organisations have to electronically sign (standardised) information sharing agreements specifying terms for the information sharing.

Part 3: Personal Information Management Services (PIMS)

Individuals managing their own data is not just ‘a trend’. It’s triggering the growth of completely new markets - new types of consumer service that, potentially, change the way consumers deal with their suppliers.

Up to now the potential of these markets has been rendered invisible by organisation-centric assumptions: if the data is being collected and used by the organisation, it’s not going to be deployed as a service to the individual.

Our research, summed up by the chart in Figure 2 identifies three such ‘invisible markets’ - all counterparts to existing, established markets where organisations collection and manage the data. We believe they will become the fastest growing new consumer markets of the 21st century, addressing consumer needs traditional industrial structures have failed to identify and serve.

- ① **Invisible market 1**
Individuals managing their own data
- ② **Invisible market 2**
Life management services: (individuals as points of integration of information about thier own lives
- ③ **Invisible market 3**
Decision support services

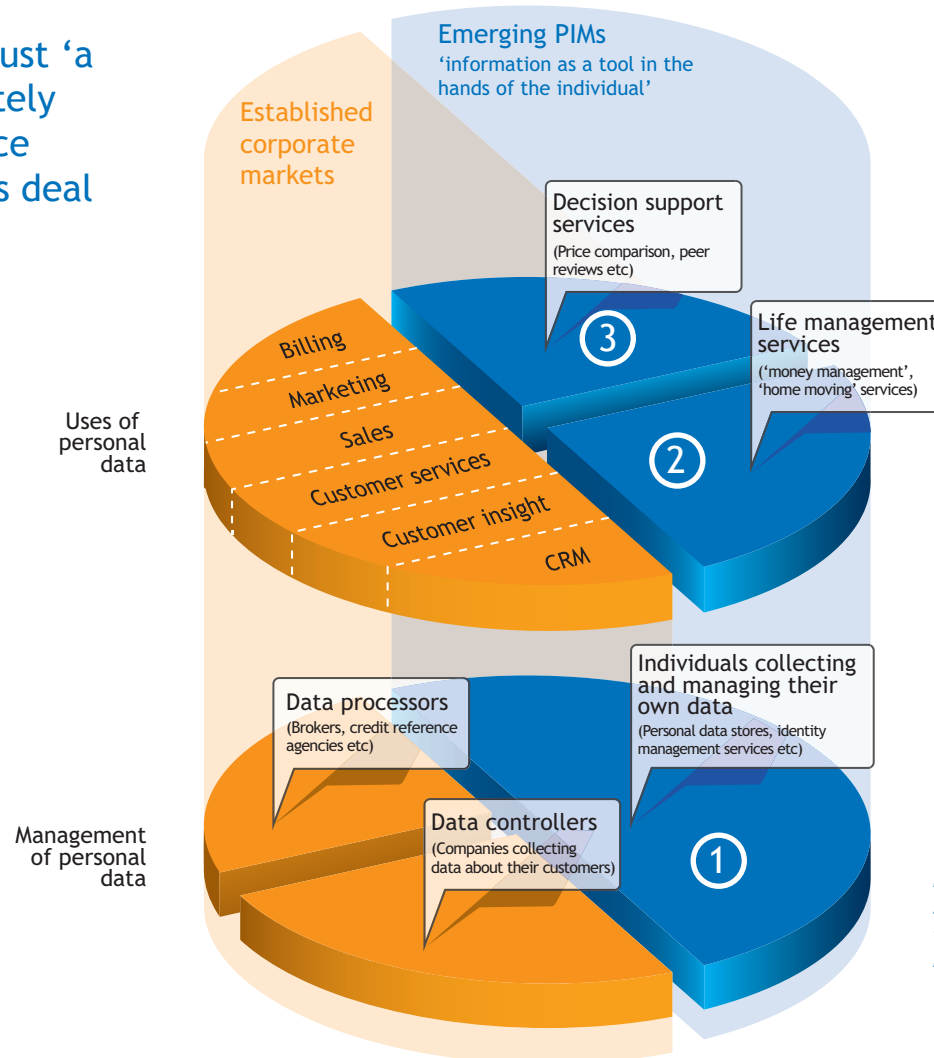


Figure 3: Emerging markets for Personal Information Management Services - previously rendered invisible by organisation-centric approaches to data management

1. The first 'invisible market' is for Personal Data Management Services, which we have just discussed (above).
2. The second 'invisible market' is for 'life management services' that help individuals join up the dots. Currently, each organisation collects data about its own customers, which means that data about each individual is dispersed across hundreds of different organisations - none of which can see the full picture. If organisations try to share customer data with each other they invade individuals' privacy and risk breaching the Data Protection Act. The result is duplication, waste and missed opportunities.

By helping individuals join up the dots of information about their own lives, new services can help them manage their lives more efficiently. For example, 'managing my money' or 'moving home' involves dealing with many different suppliers. The key to these services is their ability to help individuals gather and use information as an administration, operational and logistical tool: organising, arranging, orchestrating, monitoring, checking, coordinating, synchronising, planning, administering, automating etc.

3. The third market is for services that help individuals gather and use the information they need to make better decisions. Current marketing theory focuses on marketers influencing and persuading customers to buy their brands. But individuals have a deeper need which remains unmet: that need to make better decisions. Ctrl-Shift estimates the market for consumer-decision support services is already worth £1.5bn in the UK - and growing fast.

Life Management: Mint

Mint is a free Personal Finance Manager service available in US. It doesn't provide any 'financial services' as such. It simply helps individuals put information about their financial affairs together from different providers - including information from current accounts, credit cards, mortgages and investment accounts - in a single integrated overview on the web or on the phone. People can see the complete picture of their finances with one simple, secure log-in, and make decisions using this information.

Mint helps individuals manage their money by providing analytic tools such as financial charts, tables and graphs, showing exactly where and how it is being spent.

Decision- support: TheFind, ShopSavvy

Once, information services for individuals were restricted to the home - where the computer was. Today, information access and comparison shopping is going mobile. In fact, SearchEngineLand predicts there will be more US mobile web users than PC by 2015.

TheFind, a US-based service, is a vertical search engine that uses a bar-code scanning device on the mobile phone to access information about over 320 million products in 500,000 stores. Shoppers in one physical store can check for prices of the same or similar products in nearby stores. They can select green, local or favourite brands and there is the capability to save products and searches for future reference.

ShopSavvy offers a similar service but takes this a step further with user-generated content. Its 8 million consumers can share products and services they find on Twitter and Facebook. Customers of ShopSavvy can publish new products, deals on prices and even a photo, or export their lists and scan history using iTunes file sharing. ShopSavvy claims to have 1.2 million users making use of its service. It is no surprise that IE Market Research predicts that more than \$50bn will be spent on items using a smartphone by 2014.

Part 4: A new competitive landscape

The shift from a 'data gathering' to a 'data sharing' environment brings both opportunities and threats for organisations

In Part 2: 'Individuals as data managers' - we focused on developments taking place on the side of the individual, largely outside of organisations' processes, influence or control. In this section we turn to how these developments are impacting on organisations' own data management activities.

Our legacy approach to data management - where only organisations gather and use customer data - has its flaws which can now be addressed.

A single customer view

Because each organisation collects data relating only to its particular transactions with the customer, it only gains a narrow, partial view of the customer's activities. Amazon knows what books I buy from Amazon but it does not know what books I buy from other booksellers. Information about each individual is dispersed across thousands of different, separate databases, none of which can see the complete picture.

Individuals are the natural point of integration of information about their own lives. In the emerging personal data landscape, individuals will be able to build a genuine 'single view' of their lives, for the first time - and to share this information with chosen suppliers, advisors and partners.

Data quality and accuracy

No sooner has the organisation collected data about the customer than its accuracy begins to decay. People move home, change contact details and change their preferences and priorities. This forces organisations to incur a double cost: investing time, money and effort to maintain data quality (a Sisyphian task); and wasting time and money acting on data that is inaccurate.

Because they are using data to manage their own lives, individuals will keep it more up-to-date and accurate. By sharing this data with organisations individuals will help 'curate' organisations' data too.

Trust

Today's one-sided, unilateral approach to data gathering undermines trust. Organisations always want to collect more data in order to gain deeper insights. But the more data they collect, the more intrusive they become (or appear to become). Far from building relationships with customers, this approach tends to undermine them.

When individuals can control what data they share with who, for what purposes trust is built into the process. This is essential for mass scale, information-sharing between individuals and organisations.

Reaching the parts traditional data cannot reach

Current approaches to data gathering focus on transactions/usage and interactions and, more recently, what customers happen to be talking about online. But these data sources have limited value.

In the emerging landscape individuals can routinely volunteer information traditional data gathering techniques cannot reach.

This Volunteered Personal Information (VPI) includes:

- what the individual's future plans and intentions are
- what their changing motivations, preferences and priorities are.
- what a genuine single view of the customer looks like
- what 'persona' the individual is acting under
- reasons why they did what they did
- how the context and circumstances of their lives are changing
- factual updates: 'I have changed address'

For organisations starting on this journey, Ctrl-Shift has constructed a VPI Audit. Try it! (It's free).

To hoard or share?

In the emerging landscape, organisations with trust-based information sharing relationships with customers will have significant competitive advantage over those with traditional data gathering relationships.

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Potential advantages include placing the brand front of mind, enabling the innovation of new products and services (including PIMS), reducing service costs, reducing sales costs, driving up loyalty and satisfaction. It will be very hard to compete with the winners in this race.

To flourish in the new personal data landscape organisations will need to construct new types of information sharing relationships with their customers. This requires the integration of three different areas of activity.

1. Build Trust

Organisations need to review which data policies, practices, expectations, norms, internal organisational attitudes and incentives they need to build the levels of trust necessary for customers willingly share additional personal information with them on a routine basis.

This trust challenge is multi-dimensional. It includes the legalities and technicalities embedded in privacy policies and terms and conditions but it extends to corporate

culture and values, staff training and incentives, communications with customers, and customer experience - how customers experience the interaction at their chosen channels and touchpoints.

It also includes what the organisation doesn't do. For example, in the emerging environment certain practices such as selling customer data on to third parties or failing to provide customers with easy mechanisms for managing permissions may become unacceptable.

2. Enable easy, safe information sharing mechanisms and processes

If large scale information sharing between individuals and organisations is to work, information sharing processes must be made as easy and intuitive as possible. Organisations need to address key questions such as: What information sharing processes do customers prefer to use, for what bits of information, in what circumstances and via what touchpoints? (Different types of information and information-sharing occasions may need different mechanisms.)

Organisations will need to map out the sorts of information they wish to share with customers in both directions:

- what digital information should the organisation share with the customer? This may include billing records, transaction records and product and service usage data.
- what information could the customers share with the organisation?. This could include future plans and intentions, permissions, questions, a 'genuine' single view of their purchases and activities, administrative updates and corrections ('I have a new email address'), and changes to personal circumstances.

3. Maximise value

The purpose of increased information sharing is to add value by cutting costs, improving existing services and processes, or making new services possible. Each improvement requires its own specific data inputs.

Organisations therefore need to map out the new information sharing opportunity: what information do we want to offer, and receive, for what purposes? Is it to streamline admin, provide advice, or offer an innovative service? What value is generated as a result, for the customer, and for us? Where are the biggest win-wins?

Summary: an evolutionary journey

In this Briefing Paper we have identified the drivers behind a far reaching change in the relationship between individuals and organisations.

- Many different vectors of change - commercial, technological, regulatory, public opinion - are combining to give individuals' greater control over the management of their own data.
- A new industry of Personal Information Management Services is emerging to help individuals deploy information as a tool in their own hands. PIMS help individuals manage their own data better in order to make better decisions and organise their lives better. They bring together a wide range of different types and sources of data, including:
 - claims and verifications
 - data released back to individuals from organisations
 - information individual gather from the world around them
 - information they input about their own circumstances, plans, priorities and preferences
 - information shared with peers
 - information they capture about their own lives.

- Individuals are emerging as the natural point of integration of information about their own lives. As they do this, they are creating rich new data assets which never been seen before - data assets under the control of the individual. Individuals can share this information - or parts of it - with organisations if they see good reason to. Organisations are now entering a new competitive landscape: to create and provide individuals with 'good reasons to share'.
- To achieve this they need to construct a new type of information sharing relationship with their customers. This new 'information contract' has three core planks:
 - Trust
 - Mechanisms and processes for information sharing
 - The content and value of the information shared

Each of the factors highlighted in this paper are evolving at their own pace, with their own dynamics. They include:

- the commercial, technological, regulatory, public opinion drivers
- the different sources and types of information
- different types of services using this information
- the changing relationship between individuals and organisations.

“
Organisations need to keep on top of these different timelines, and bring their responses together to create strategic momentum.

”

How Ctrl-Shift can help

Ctrl-Shift is at the heart of these changes, advising key movers and shakers, helping to lay out the vision and possibilities, and researching the detailed progress of the shift and its implications as they unfold.

Ctrl-Shift can help organisations manage the transition via its:

- ongoing research programme, designed to track and monitor how exactly landscape is changing, where, and how fast
- Explorers Club, which brings together companies involved in the new personal data landscape to network and share learnings
- Executive Education programmes designed to bring internal executives and staff up to speed about how the landscape is changing, and what it means for them
- Advice and consultancy: advising companies in specific areas about which opportunities to seize, how and when.

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