

ENABLING DIGITAL SELF-SERVICE

1 THE PROMISE OF THE INTERNET HAS FAILED FOR SOME ONLINE TRANSACTIONS

In the heady days of the early 21st Century, the promise was that we were going to do *everything* on the Internet. Everything was going to be “self-service”, and that would allow dot-com companies to provide the same products and services for less, and traditional companies to reduce costs. There was much talk about the replacement of “bricks and mortar” companies by online companies. To a large extent, that has occurred – the internet has become a dominant (though not exclusive) channel for our interactions with organizations and each other.

Much of our information now comes from the internet – encyclopaedic information from Google and Wikipedia, news from a thousand online sources, product information from vendors and review sites, reviews of restaurants and other services. We also transact on the internet – Products from Amazon, eBay and Craigslist, flights and hotels from a myriad of sites, movies from NetFlix. And we increasingly communicate and socialize on the internet – starting with humble email, and evolving to Skype, FaceBook and LinkedIn. And as the internet becomes increasingly mobile, we spend more and more of our time online – even when we’re on the move.

But there is one class of transaction that largely hasn’t made it to the internet – complex transactions.

If you think about it, when you purchase a product on the internet, you spend most of your time researching, comparing, and pricing the product. However, the actual purchasing transaction, whether it’s a book, a flight or a movie, is blindingly simple. You click on your chosen product, provide one or two additional details such as quantity, delivery address and credit card details (and often those aren’t required for your second or subsequent purchases), and you’re done. Easy. Simple.



It's the more complicated transactions that typically don't get done on the internet: An application for a new life insurance policy; your new home loan; the admissions form at the hospital; your application to study at a university; a copy of your birth certificate; registering to vote; an application for a government grant; health insurance; making an insurance claim after a theft.

These types of transactions are still, in the vast majority of cases, performed by filling in a paper form with a pen.

Paper is so 19th century. Why are more complicated transactions still performed using paper?

2 WHY DO WE STILL PERFORM MORE COMPLEX TRANSACTIONS USING PAPER?

There are several reasons why these more complex self-service transactions are still usually performed on paper.

2.1 PROBLEM: IT IS TOO HARD, AND TOO EASY, TO DESIGN A PAPER FORM

It sounds like a contradiction.

On the one hand, almost anyone can whip up a paper form using off-the-shelf office products. It's so easy, and for that reason, almost every organization has hundreds or even thousands of paper forms.

On the other hand, designing a paper form *well* is actually surprisingly difficult. It requires a unique blend of visual and design skills, information architecture, as well as the ability to place oneself into the head of the person filling out the form, and the ability to convey often complex instructions in a simple way. At the same time, we need to conform to corporate branding policies, to ensure that all forms look and behave in a similar way. This is why there are so many truly bad forms out there, and why many larger organizations are attempting to centralize form development into a single shared service with specialist skills.

And then there are inevitably a whole lot of other factors that need to be taken into account when designing a form, such as approvals from the legal department, integration with back-end systems, requirements for scanning and OCR, managing versions, consistency across forms, printing, distribution and storage, and much more.

Note: Figure the amount of your contribution deduction before completing this form. See your tax return instructions.

Section A—List in this section **only** items (or groups of similar items) for which you claimed a deduction of \$5,000 or less. Also, list certain publicly traded securities even if the deduction is over \$5,000 (see instructions).

Part I Information on Donated Property—If you need more space, attach a statement.

1	(a) Name and address of the donee organization		(b) Description of donated property			
A						
B						
C						
D						
E						

Note: If the amount you claimed as a deduction for an item is \$500 or less, you do not have to complete columns (d), (e), and (f).

	(c) Date of the contribution	(d) Date acquired by donor (mo., yr.)	(e) How acquired by donor	(f) Donor's cost or adjusted basis	(g) Fair market value	(h) Method used to determine the fair market value
A						
B						
C						
D						
E						

Part II Other Information—Complete line 2 if you gave less than an entire interest in property listed in Part I. Complete line 3 if conditions were attached to a contribution listed in Part I.

Example of a bad paper form design

We need a way to build elegant Self-Service Forms, yet do so in a way that is easy and intuitive. We need to be able to build forms that are sophisticated, reliable and consistent, and conform to corporate style guides, without specialist design or programming skills.

2.2 PROBLEM: IT'S REALLY HARD TO BUILD DIGITAL FORMS WELL

Digital forms provide the promise of solving many of the issues of paper forms, including creating a better and easier user experience for the end-users. But if building paper forms is hard, building electronic forms is even harder. Not only do you require all the design skills of someone who builds paper forms, you also need to be a programmer.

This is why most digital form projects end up in the hands of the IT department.

And as soon as a forms project is run by IT, you end up with a whole lot of difficulties. Some of these include:

- Resourcing:** IT departments are busy keeping the organization running. They focus on big infrastructure projects. Surveys indicate that IT spend 80% of their budget on operations, and only 20% on innovation. A single form may be your business unit's life-blood, but to them it's almost too small, it doesn't really appear as anything more than a minor blip on their radar – and besides "if it ain't broke, don't fix it". This isn't a failure of the IT department; it is actually a completely correct focus on larger priorities. To make a somewhat extreme analogy: The IT department install the corporate eMail server, keep it running, and back it up, and even provide training and help to end-users – but business

people don't call the IT help desk every time they want to send an email – they do that themselves.

- **Release Cycles:** You become constrained by IT department release cycles. IT typically deploys new projects on a quarterly to 9-month cycle, after an extensive migration and testing process. Because IT treats a form as a monolithic application, rather than as content, there is really no easy way to fix a typo in a form and deploy it tomorrow – “you might break something else!”.
- **User Experience Design:** IT specialists are generally good technologists, but often lack the design and user-experience skills necessary to design good forms. They typically need assistance from the business to really understand the business needs and constraints.
- **Too Big vs Too Small:** A digital form isn't really just a form. There is a whole lot of other infrastructure that goes around the form –pre-population, integration with other systems, online storage, versioning, reference data and more. In fact, every digital form is a little mini-application. But a form is an application that it a little too small for IT's direct involvement, and a little too complicated for the average business user to build unaided.

The solution to this problem is to divide and conquer - make IT responsible for installing and maintaining a forms platform, but enable the business to create and manage their own forms. Digital forms are more like mini-applications, but in order to be successful, we need to be able to treat them more like content.

2.3 PROBLEM: COMPLEX FORMS, WET SIGNATURES AND OTHER INTERACTION PATTERNS ARE EASY TO IMPLEMENT WITH PAPER, BUT DIFFICULT ELECTONICALLY

For a simple online registration, or a request for information, a simple online HTML form can suffice, and can be built quite quickly using any number of different tools. But for more complex, longer, and more detailed types of transactions, such as applying for insurance or a government grant, simple HTML form technology rapidly runs out of steam – it cannot easily provide the more sophisticated form-filling experience that is required without extensive IT involvement and large costs.

And so many organizations simply give up, and revert back to “good ol' paper”.

Paper is quite tangible and physical, which makes it very easy to use for a number of interaction patterns, including:

- **You can write on it.** Wet signatures are still the de-facto way of asserting the authenticity of an individual and are used for non-repudiation. It is interesting and mystifying that a faxed copy of a form with a wet signature is often deemed acceptable, despite the obvious ease with which it can be falsified, whereas an electronic record of a transaction using a username and password isn't. This probably attests to the historical trust that we have of paper and a wet signature.
- **Attachments are easy.** It's easy to staple copies of supporting documents to a paper form, such as a doctor's letter or a copy of a birth certificate.
- **Multiple forms are easy.** It's also easy to provide a person with a pack of several different paper forms that are related. For example, when being admitted to a hospital, there are generally several forms, including one for the hospital itself, one for the doctor, another for

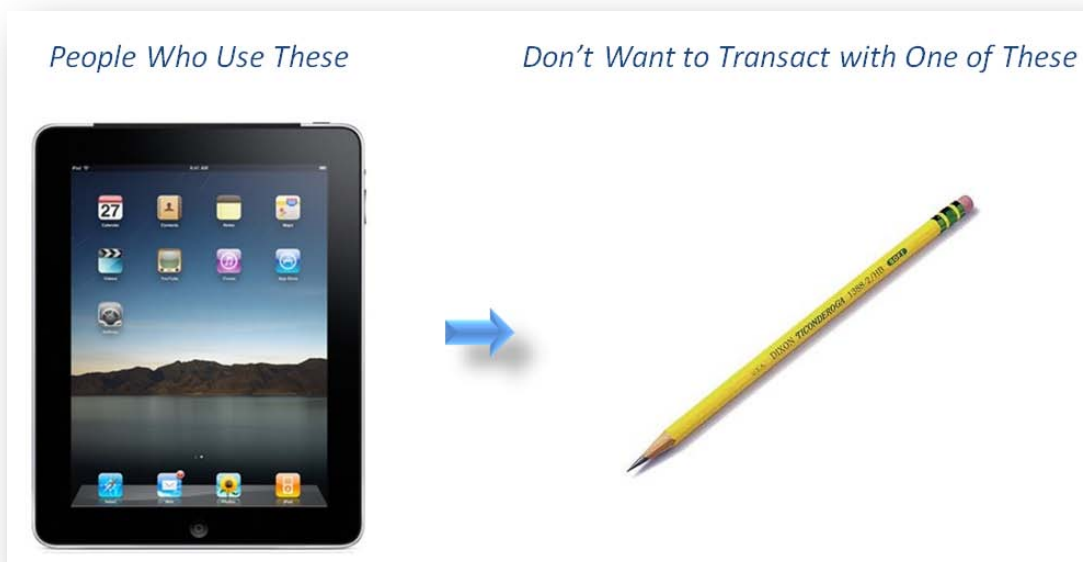
the anaesthetist. An irritating aspect to these forms is that they tend to all collect a large amount of the same information.

- **Paper is physical.** Paper is easy moved round, in person, by fax, by mail, or via internal office procedures. (Although it's also easily lost, mislaid, or damaged.)
- **Taking a break is okay.** It's easy to partially fill out a form, go off to find some extra information, and then finish it later.
- **Sharing is easy.** It's easy to partially fill out a form, and then give it to someone else to complete. Or for a company representative or agent and the customer to fill out the form together.
- **Storage is easy.** Paper is easy to file. (Although it's equally easy to misfile, and becomes difficult and costly with larger volumes.)
- **Paper is permanent.** Once you've written on it, it can't crash or run out of batteries or lose its connection. (It can, of course, have coffee spilled on it or be eaten by the dog.)

In order to be implemented successfully, digital form-filling experiences must provide similar or better patterns of interaction to those provided by paper; otherwise they won't be adopted by either consumers or organizations.

2.4 PROBLEM: MOBILE IS A NEW AND SCARY WORLD

Just in case you hadn't already heard it several thousand times already this month, the world is going mobile. Predictions are that the mobile internet will overtake the fixed internet in the next 2-3 years, and will continue to grow at a faster rate. If you're not planning and doing mobile right now, you're going to be in danger of losing your customers very soon.



The problem is that mobile is a whole scary new world, and both business-people and IT are scrambling to get up to speed. There are new technologies to deal with, new screen sizes, new interaction models that focus on touch rather than a mouse and keyboard, and a whole lot of new skills that both business and IT people need to learn in order to make the transition. You need to do

it quickly, you need to do it with your current resources, and you need to get it right first time because there is no time for making mistakes.

To compound this, do you really want to be caught in the situation where you have to design each form multiple times – once for desktop computers, again for tablet devices, and again for the smaller screens of mobile phones? No you don't.

You want to design a form just once, with its data capture interactions and business rules intact. The form platform should then auto-magically render it optimised for the particular device and screen that the user happens to be using, ensuring that all business rules and features are exposed appropriately.

3 WHAT IS THE COST OF THIS FAILURE?

There are obviously a number of reasons why paper still dominates for these more complex types of transactions. But is there any particular reason why we shouldn't simply continue to use paper? Is it costing us anything?

The answer is: Yes, it's costing us a lot.

Some of the typical costs for an organisation processing paper forms in-house are:

- Mail Handling (excluding print & postage) \$0.70 per item
 - Scanning: \$0.05 per page
 - Cost of Data entry: \$1.90 per 100 characters
 - Error Rate in Data Entry: 1.5 errors per 100 characters
 - Forms with Errors or Missing Information: 38%
 - Cost of Correcting Errors: \$7.00 to \$21.00 per instance
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- **Customer experience.** The bottom line is that a well-designed digital self-service form usually provides a much better, simpler and faster user experience for your customers. Features like in-line help, hide-show logic, automatic validation, and pre-population and cross-population make the tedious job of filling more complex forms much easier and better. Customers who have a better experience filling in your forms are more likely to be loyal, and to advocate your brand.
 - **Cost of rekeying.** Many paper forms have their data re-keyed into backend systems. Often twice, to prevent keying errors. Attempts at Optical Character Recognition are error-prone and costly. It's far better to effectively outsource your data entry costs to the end-customer.
 - **Cost of errors.** Correcting errors in paper forms is a human intensive and costly exercise, as well as creating delays and frustrations in the end-to-end fulfilment process. You can largely eliminate these errors using mandatory fields, validation rules, and in-line help.

- **Storage costs.** Paper forms need to be filed, and often stored for regulatory reasons for many years. These costs can mount up for high volume forms. Digital forms are easily filed on high capacity, low costs devices.
- **Costs of loss.** If paper forms are misfiled, then finding them if and when they are needed, can be extremely costly. Digital forms can easily be filed and found.
- **Cost to the planet.** Paper forms consume valuable resources and contribute to our carbon footprint. (Quote about savings by reducing paper in the US by 10%.) ***

There is tremendous value to be gained by moving from paper forms to digital self-service, but also intrinsic difficulties. The question is: what do we need to do differently in order to enable digital self-service?

4 WHAT DO WE NEED TO SUCCESSFULLY DELIVER DIGITAL SELF-SERVICE?

Surely this isn't rocket-science? We know it has been done, and done successfully, by some organizations– but generally only for a small number of forms. Why? Surely we can learn from these success stories, and come up with a simple, repeatable approach to delivering digital self-service for any organization.

Avoka has been successfully delivering digital self-service solutions to customers across a range of industries since 2002. We have discovered there are a number of simple pillars upon which you can build a successful digital self-service capability.

It can be done – let's examine how.

4.1 APPLY 19TH CENTURY INDUSTRIAL REVOLUTION PRACTICES AND ESTABLISH A FORM FACTORY

If you've got lots and lots of forms to convert, you can't implement them as one-offs each time. You need to come up with a "Factory" approach to building forms. You need a Forms production line, with pre-built templates and tools to help you churn out forms fast, consistently and reliably.

Treat forms development like a repeatable production line – a forms factory.

4.2 RE-INVENT THE RELATIONSHIP BETWEEN THE BUSINESS AND IT

- IT needs to install and manage the Forms platform, back it up and keep it running.
- The Business needs to be able to create and manage their own forms, using the forms platform.

The forms platform also needs to allow the form to become a mini-application, with features that extend beyond simple forms, including pre-population online save, attachments, status updates, to-do lists, and delivery.

Each department needs to be able to focus on what it's good at.

4.3 REINFORCE YOUR BRAND

You probably wouldn't be very happy about one of your employees meeting a customer dressed in torn clothes, and being rude towards the customer. You would generally want your employees to reflect your brand in the way they dress and behave.

A form is often the first meaningful interaction a customer in the digital world has with your brand, and you want to ensure that the first impression is one that reinforces your brand, both in the way that the form looks and behaves.

Your self-service form system should help to drive consistency and compliance with your corporate brand, both in terms of look and feel, as well as behaviour. And if your brand changes, it should be extremely easy to change the branding across all your forms.

Your forms and the way that people interact with them need to reflect and reinforce your brand.

4.4 TREAT YOUR DIGITAL CUSTOMERS AS IF THEY WERE THERE IN PERSON

If one of your sales assistants was helping a customer fill out a form, he (or she) would probably assist the customer in a variety of ways. Firstly, he knows the customer, he might turn up with form already partially filled with the information he already knows about the customer. He would explain the meaning of unclear terms in the form, skip over the sections of the form that weren't relevant, and ensure that all relevant parts of the form were filled out completely and correctly, and that supporting documentation is provided.

In the same way, you should try to establish a form filling process that replicates this personal experience. The digital self-service form should:

- Be pre-filled with any information we already know about our customer
- Hide and show different parts of the form based on answers that the user has provided
- Provide in-line assistance for all fields and sections
- Identify and enforce all mandatory fields
- Validate all provided data, and provide clear and simple messages if anything needs to be corrected.

Your digital forms should guide your customers through the process of filling out a form, just like a real person would.

4.5 LEVERAGE BEST PRACTICES IN DIGITAL FORM DESIGN AND MANAGEMENT

Let's face it, most users hate filling in forms – we should strive to make the process as painless as possible. There are some specialist organizations and usability experts that have become extremely proficient at designing digital forms, both in the way that they look, and the way that they behave. The goal is to make the form-filling experience as easy and pleasurable as possible for the end user. You should learn from these organizations, rather than attempting to learn from your own experience.

There are several features that you can build into your forms that make life better for users. These include:

- Design your forms to be **visually appealing**. For example, using color for emphasis and branding can be very helpful but overusing color can be quite distracting; lining fields up make them more pleasant to read; use of white-space can make a form much more readable.
- Use **best practise usability** techniques to guide the user through the process. For example, don't try to squish the fields very close together to save paper - it usually doesn't matter how long a digital form gets – readability is much more important, and white-space contributes to readability. Similarly, don't use a very small font that some users will find difficult to read.
- Consider using **hide-show logic** to only show fields that are relevant to the particular user. For example, if I'm not married, I don't expect to see a field asking for my spouse's name. Hide-show logic allows the user to focus on just filling in what they see, instead of having to read complex instructions.
- **Embed help** information directly in the form at the point of use, rather than publishing separate documents explaining how to fill in the form.
- Clearly identify to the user those fields that are **mandatory**, versus those that are optional.
- If there are fields that must **conform to a particular format** (for example, a social security number or a customer code) make sure that the form validates that field, and provides meaningful errors and help if the user gets it wrong.
- For longer forms, consider presenting the form in a **wizard style** or with collapsible sections rather than as a single long document.
- **Optimise how your form looks and behaves** depending on the device that your customer is using. For example, a conventional drop-down list doesn't work very well on a touch device, which should use a different user-interface paradigm.
- When errors do occur during form filling, **present these errors in a simple and usable way**. For example, do not prevent the user from moving on to the next field if they haven't completed the current field correctly – they may want to come back to that field later. Allow the user to easily see what fields are missing or have errors, and to easily locate and navigate to those fields.
- Don't make the user perform arithmetic in the form – the form should **perform calculations** for the user.
- Where possible, **re-use pre-built components** rather than having to build every single form individually. For example, a component that validates an email address, or a composite component used to capture an address.
- Consider having a simple **"landing page"** before the customer gets to the actual form, that describes what the form is used for, how long it should take to complete, and what information the user will have to provide. Consider a summary page once the form is complete that tells the user what to expect next.
- Provide a simple way of creating a non-editable **document-of-record** that can be saved by both the end-user and the organization.

Don't re-invent the wheel – leverage best practises from specialist form practises and usability experts.

4.6 INTERACT WITH YOUR CUSTOMERS HOW AND WHERE THEY WANT TO INTERACT

Even a few short years ago, most customers wanting a digital experience would sit down in front of a desktop computer. Some customers used laptops, but these would often still be connected to wired networks. Then there was a rapid expansion towards mobile computing – wifi, 3G, smart-phones, tablets and even TVs. Technologies are also changing – Adobe's PDF format is still a strong choice of many, but other form technologies such as HTML5 are becoming increasingly important.

The modern customer is increasingly mobile, and increasingly accessing your forms using devices that range from very small smart-phone screens to massive TV and desktop screens.

You need to be able to design a form-filling experience once, and delivers that experience to end-user in a way that is appropriate for their device capabilities and screen size.

4.7 LET GO OF THE PAST – EMBRACE THE FUTURE

Many paper forms today are designed to a style that was popularized around the 1940's. We call this style "boxy", and it was designed in a time when printing technology was fairly primitive (no colours or even shades of grey), and there was an emphasis on compressing as many fields onto the form as possible, rather than any consideration of usability. This format generally also does not take into account the fact that the data from forms usually makes its way into some sort of database or other system, and that digital forms can assist the user with the form-filling process.

Cut here and give Form W-4 to your employer. Keep the top part for your records.

Form W-4 Department of the Treasury Internal Revenue Service	Employee's Withholding Allowance Certificate Whether you are entitled to claim a certain number of allowances or exemption from withholding is subject to review by the IRS. Your employer may be required to send a copy of this form to the IRS.	OMB No. 1545-0074 2011
1 Type or print your first name and middle initial.	Last name	2 Your social security number
Home address (number and street or rural route)		3 <input type="checkbox"/> Single <input type="checkbox"/> Married <input type="checkbox"/> Married, but withhold at higher Single rate. <small>Note. If married, but legally separated, or spouse is a nonresident alien, check the "Single" box.</small>
City or town, state, and ZIP code		4 If your last name differs from that shown on your social security card, check here. You must call 1-800-772-1213 for a replacement card. <input type="checkbox"/>
5 Total number of allowances you are claiming (from line H above or from the applicable worksheet on page 2)	5	
6 Additional amount, if any, you want withheld from each paycheck	6 \$	
7 I claim exemption from withholding for 2011, and I certify that I meet both of the following conditions for exemption. <ul style="list-style-type: none"> • Last year I had a right to a refund of all federal income tax withheld because I had no tax liability and • This year I expect a refund of all federal income tax withheld because I expect to have no tax liability. If you meet both conditions, write "Exempt" here		
Under penalties of perjury, I declare that I have examined this certificate and to the best of my knowledge and belief, it is true, correct, and complete.		
Employee's signature (This form is not valid unless you sign it.)		Date
8 Employer's name and address (Employer: Complete lines 8 and 10 only if sending to the IRS.)		9 Office code (optional)
		10 Employer identification number (EIN)

Figure 1 - An example of a "boxy" layout

This style has never been very appropriate for digital forms, for a variety of reasons, both human and technical. (Many would argue it is not even appropriate for paper forms, based on what we now know about usability.) For example, this style makes it very difficult to implement hide/show logic in

your form, or to implement a repeating section or table. This style also makes the form very difficult to change – adding or changing a single field may require large sections of the surrounding form to be re-organized. Yet despite the obvious problems, many organizations continue to insist on using it.

Smart-phones and tablets have put the final ‘nail in the coffin’ of this style of form. The user interfaces provided by smart devices simply does not support these types of forms, and end-users will have serious frustration if we even try. It is time to let go of the past, and design forms to be usable for the device that they are displayed on.

We understand that in some cases, it is required that the document-of-record conform to a historical style for legal or statutory reasons. We still believe that it is time to start challenging some of these “requirements”. However, if necessary, it is still possible to separate the form that is used to collection the data, from the form that is used when generating the printed document.

It's important to design forms in a style that is appropriate for modern devices and audiences.

4.8 INVEST IN SYSTEMS THAT ALLOW YOU TO TREAT FORMS AS CONTENT

Larger organizations no longer build their web sites using HTML savvy “web-masters”. The IT department installs a web content management system. The IT department then creates standard HTML templates, style-sheets and manage other technical aspects of the site. Web site authors create the site by authoring content using simple- web-based tools. The overall system renders that content to the end-users.

This is a much more scalable and simple way of building a web site. Let IT worry about the infrastructure, and let business people develop the content.

A form is more like a mini-application than simple content, but in order to be successful, it must be treated more like content. The business should be able to develop the content using easy-to-use tools, and be able to publish that “content” to the forms platform. It must be easy and simple to modify, approve, and re-publish a form.

There are several benefits arising from this approach:

- **Separation of responsibilities.** Line of business people know what their forms need to do. They should be able to design and publish their forms themselves, without relying on IT resources to do it.
- **Time to market.** In most organizations, the IT department is swamped. They are mostly concerned with maintaining existing systems, and long term infrastructure projects. To manage this, IT usually has strict software development lifecycles, with releases occurring on a 6 or 9 month basis. The business just can’t afford to wait for a release cycle to add a form or change an existing one.
- **Internal Processes.** Treating a form as content rather than as a fully-fledged application makes the process of designing, approving and publishing a form much simpler.

Of course, you need a system that allows you to publish your forms as if they were content – a simple web content management system on its own does not suffice. Interacting with regular web

content is generally a simple “read-only” exercise. Interacting with a form is often a much more complex series of interactions, and requires a forms platform that caters for these interactions.

Treating a form as a type of content makes an organization more agile, while at the same time reducing risk and effort.

4.9 INVEST IN SYSTEMS THAT TURN A SIMPLE FORM INTO A MINI-APPLICATION

Building your form is just the first step. There are a whole lot of user-interaction patterns that your form has to be able to participate in. Some of these user-interaction patterns include:

- **Pre-fill.** The ability to pre-fill the form with any information we already know about the customer, as well as relevant other information, which aids the customer to complete the form quickly and accurately. This requires a platform that supports both single-sign-on and integration with backend systems.
- **Profiles.** A user who completes multiple forms should have the ability to set up a user-profile that contains information completed in previous forms. This should be used to automatically pre-populate subsequent forms.
- **Save Online.** For longer forms, a customer needs to be able to save a partially completed form, and come back and finish it later.
- **Attachments.** Often supporting documents are required to complete an application. The system must support the ability to attach these electronically or by traditional mail/fax.
- **Signatures.** The customer should have the ability to sign the form in a number of different ways, including digital or electronic signatures of various kinds, as well as “wet” signatures.
- **Receipts.** A customer should be able to obtain a read-only and printable copy of their submitted information for future reference. The customer should also be able to see a list of all previously submitted forms.
- **Payments.** A customer should be able to easily make a payment associated with the form they have completed.
- **Status updates.** Many form submissions require a payment which customers expect to have integrated into a seamless experience. Once a submission is made, promising customers with online, email and SMS updates regarding the processing of their request can reduce call volumes to a call centre, as well as being a more convenient way for a customer to check on progress.
- **Registration services.** The system must allow users to self-register, reset forgotten passwords, view and edit their profile information, and perform other actions related to their registration. If necessary, single sign-on should be enabled between the main web site and the forms platform.

It is important that these different types of interactions can be very simply configured when the form is deployed, rather than requiring custom and costly changes to application logic. This allows different combinations of interactions to be defined for different types of forms.

Your forms system should allow you to simply configure your forms to change the interaction models that allow it to behave as a mini-application, without writing any code.

4.10 INVEST IN SYSTEMS THAT PROVIDE AN INTERACTION AND INTEGRATION HUB

Filling in a form is not a one-step operation. To be truly useful, a form must potentially participate in a complex set of interactions between the user and the organization's backend systems.

For example, my experience completing a form transaction may be something like this:

- Click on a link to open a particular form.
- Be pleasantly surprised that the form is already partially filled in when I open it. The system seems to know who I am and fill in relevant information for me.
- As I'm filling in the form, information that is relevant to me appears in drop-down lists. For example, there is a drop-down list that shows just the courses I am enrolled in, rather than all courses the university offers.
- Once I have completed the form, I'm informed that I need to provide a web signature for legal reasons. I am instructed to print the form, sign it, and then mail it to the organization. The digital version of the form will be "held" until it is matched up with the signed paper form (using a barcode on the printed form), after which it will be released for processing.
- The data from the form I submitted is routed to an appropriate person within the organization for approval. Once approved, it will automatically update my details in the backend system.
- I can log into the forms platform at any time to find out what that status of my application is or subscribe to receive email or SMS notifications for progress updates.

This is just one of many different possible interaction and integration patterns.

The form platform needs to be able to serve as a transactional hub, orchestrating these interactions between the user and the organization's backend system. This needs to be done in a way that is flexible and secure.

4.11 INVEST IN SYSTEMS THAT SCALE & PERFORM

Your self-service forms system is the public face of your organization. Research by Gartner shows that 85% of business processes begin with a form. You need to make sure that your forms platform can scale as more and more users interact with you via digital self-service forms, otherwise your users will simply give up and go elsewhere. Your system also needs to provide usage metrics, so that you can plan out future growth requirements.

Your forms platform must also provide a guaranteed quality of service. At some point, no matter how well you scale your system, there is a possibility of the system becoming swamped due to unexpectedly high volumes. At this point, rather than degrading the experience for all users, the system should maintain an adequate level of performance for those users it does service, and present a "Please come back later" page for those it cannot service. It is much better to keep the system usable for a smaller number of people, than to make it unusable for everyone.

The forms platform should be self-monitoring, and adjust itself based on load, rather than requiring manual intervention.

Your forms platform becomes a critical channel of interaction with your customers. It needs to be a robust system that provides guaranteed quality of service to your customers.

4.12 FOCUS ON BUSINESS NEEDS, NOT TECHNOLOGY

Companies that specialize in technology are never going to be able to assist you to build and manage your forms. Most companies that build forms technology are software companies – and the tools they create inevitably end up looking and working like software development tools. You need to partner with a company that specializes in SmartForms, and has had years of success in building SmartForm mini-applications for a wide variety of customers.

Some of the attributes of a business-oriented forms platform include:

- **Productive.** The system must be highly productive, allowing large numbers of forms to be produced quickly and easily by non-technical staff.
- **No design skills.** The system should not rely on the form designer having graphic design skills in order to produce a good-looking, style-compliant form. The style of the form should be encapsulated into style sheets and templates.
- **Rules-based.** The system should not require form designers to learn complicated scripting or programming in order to add sophisticated features into their forms. Instead, it should support a simple rule-based way of defining business rules. Conversely, it should support more sophisticated programming capabilities if required, ideally with the option to encapsulate this complex logic into a re-usable object.
- **Re-use.** The system should focus on and enable re-use.
- **Configured not programmed.** The system should allow different types of interactions with the form to be specified by simple configuration, rather than by having to write custom software.
- **Enterprise class.** The system should focus on the needs of enterprises. This includes a number of enterprise features, such as version management, translation into multiple languages, data dictionaries, automatic generation of XML Schema definitions, flexible integration options, fault-tolerance, administrative consoles, and more.

You need a system that focuses on business needs, rather than technology.

5 SUMMARY

There are significant benefits for your organisation to move to Digital Self-Service including Customer Satisfaction, Increased Sales and Operational Efficiency through leveraging the lowest-cost channel for customer service. Not to mention the benefit of enabling digital self-service for your employees when on-boarding a new staff member, submitting expenses or requesting capital expenditure.

There are significant benefits to your customer when you offer Digital Self-Service including Convenience, Immediacy, Empowerment and the opportunity to enjoy a Great Customer Experience as offered by your organisation which will undoubtedly be *Liked* on Facebook and *+1* on Google.

Stop relying on paper for transactions that don't fit within your existing CRM, ERP, eCommerce type systems. There is a better and proven way. SmartForm Apps hold the key to unlocking the potential benefit of digital self-service.

Some examples from Avoka's experience including:



Telecommunications Company

100 Fold increase in product orders for complex Business focused telco products once Digital Self-Service was enabled



Government Agency

Reduced processing time for Land Title requests from 3-5 days to 15 minutes



Wealth Management Company

Increased "electronic account opening" from 7% to 100% and reduced errors associated with paper forms from 35% to 0%

Avoka have taken their learning from dozens of large Digital Self-Service Enablement projects in a range of industries and packaged this in to Avoka SmartForm Factory – a Digital Self-Service Enablement solution.