

# Innovation by design

Irish companies creating  
competitive advantage

2008

Centre for  
**Design Innovation**



# Introduction

Irish companies that use design are more successful than those that do not. This fact was borne out of research published by the Centre for Design Innovation in the beginning of 2007. The challenge was to create a practical approach and tools that organisations could use to innovate and grow.

The result was Innovation by Design, an 18-month programme of workshops, research and mentoring for six Northwest organisations that began in June 2007. Precision toolmaker. Agricultural co-operative. Software developer. Third level institute. Airport. Heavy machinery manufacturer. Six

very different organisations across six very different sectors; yet all with the common goal to grow their businesses.

Within 15 months different participants have launched new brands; generated hundreds of ideas; explored new markets; created prototypes for new products; redesigned their product development processes; delivered new and enhanced services to their customers; briefed and contracted design agencies; and one even renamed their company. Everyone has applied a design approach to understanding customers' needs first, which is key to identifying the right ideas to commercialise.

But don't take our word for it, read about Avenue Mould Solutions, Connacht Gold, Infacta, Institute of Technology Sligo, Ireland West Airport, and Mantis Cranes to see what they have accomplished.

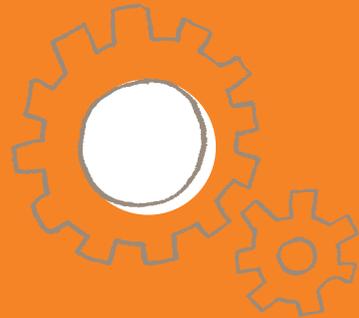
In the end, success of the programme will be judged by the companies that took part and these are their stories in their own words.

## **Justin Knecht**

Programme Manager  
Centre for Design Innovation

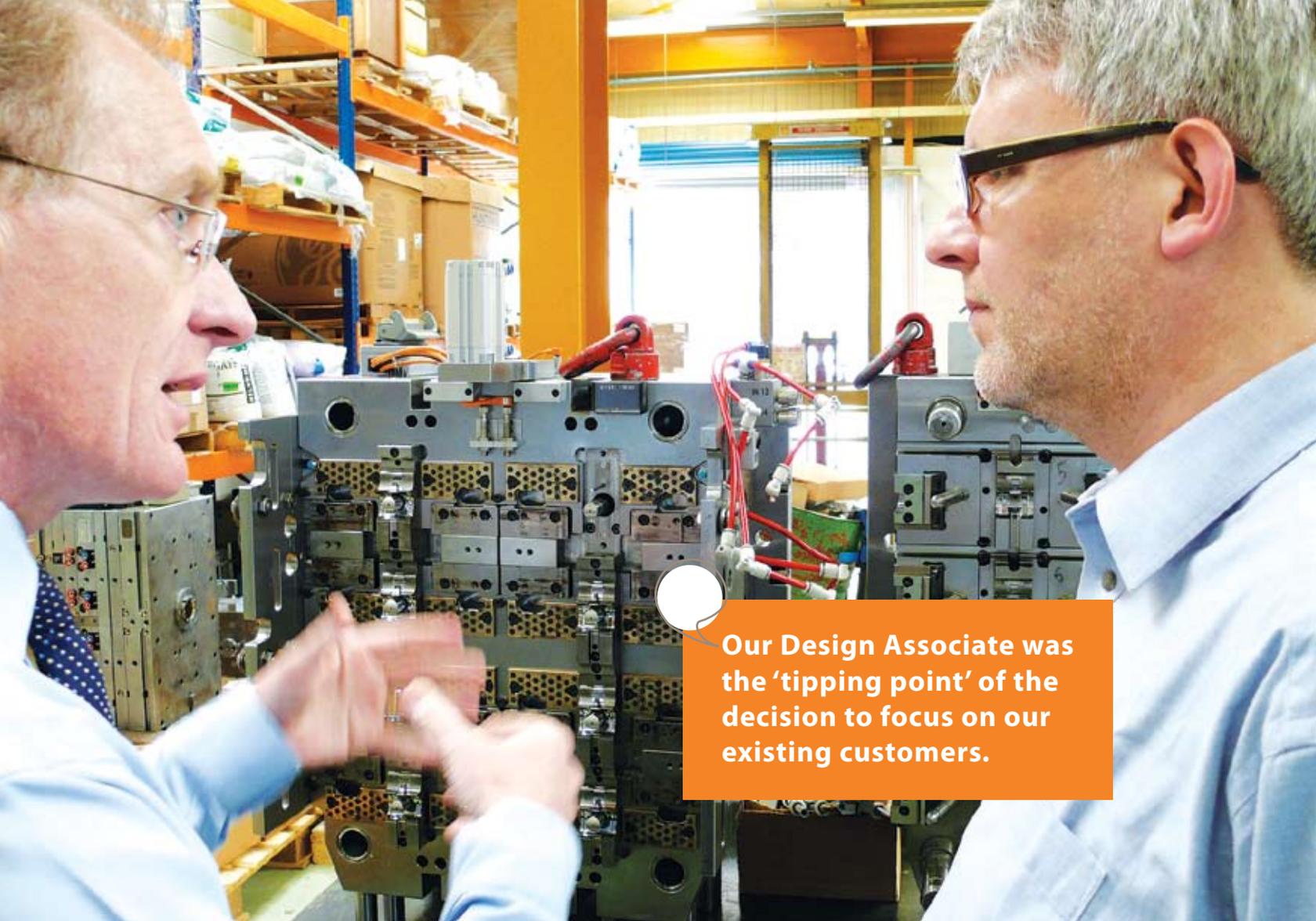
# CASE STUDY

# 1



# Avenue Mould Solutions

Avenue Mould Solutions specialises in the production of precision tooling primarily for the pharmaceutical sector. The company is one of a few remaining mould makers in the Northwest of Ireland, which used to be a national centre for tool & die production. The company is a leader in its field and has technical capabilities that make them an elite tooling provider in Europe. Still, Avenue faces competitive challenges of a softening market, price sensitivity and physical location to acquiring new customers.



**Our Design Associate was the 'tipping point' of the decision to focus on our existing customers.**

# Defining the right challenge

At the outset of the Innovation by Design programme, Avenue was looking to develop and market a new line of their own products for the first time; a risky proposition. Through conversations with their Design Associate, Jonathan Ball, they worked towards enhancing their service offering to existing customers. “We didn’t have a lot of product development competency in-house and would have had to dedicate a lot of resources to that project,” explained Managing Director, Felim McNeela. “Our Design Associate was the ‘tipping point’ of the decision to focus on our existing customers.”

On reflection, Sales Manger Des Forde added, “We would have been doing a new product in an old way. Now we could springboard on the tools and techniques we learned should we choose to do a new product in the future.”

Over the fifteenth month engagement with the programme, design associates spend five days working with each company. “The relationship with the Design Associate was very beneficial, and I wonder if we even could have gotten more from it; even more contact time. He had a lot of relevant experience from our point of view,” said McNeela.

Part project manager and mentor, design associates help the companies apply what is learned through three workshops during the programme. “The design associates were the catalyst. If we had been left alone to do the work, it probably would have been put on the long finger,” explained Forde. “It wasn’t closed mentoring. You weren’t relying on the mentor to do the work. We learned by doing things ourselves,” added designer Andrew Hodson.



The benefits really became clear to us when we began doing user-centred design.

# Involving the real experts; your customers

Four employees, including Managing Director, Felim McNeela, were exposed to new research tools to better understand their customer needs in order to enhance their service offering at the first user-centred design workshop. The workshop activities provided the first experiences in trying out design research techniques, as well as other tools for prototyping ideas and addressing teamwork skills. “The one thing that stood out was building the tower,” recalls Andrew Hodson. “There were four of us there and we got all the cups and stuff to put together and were given what to do. At one point I stopped and looked at the table and Des was doing one thing; Felim was

doing another thing; and Paul was doing another thing. We were supposed to be working as a team and each of us had a different way or different view on how to get the job done and none of us were working together at all. I think everybody noticed that. We needed to start working together to get an end goal.”

Armed with the new techniques, the Avenue team planned an initial user-centred visit to key client Covidien Healthcare; not entirely sure all the tools were appropriate to use with clients. To be safe, they prepared standard questionnaires. “We had eight different batches of ten sheets of questionnaires that we never used. We should frame

them,” recalls Forde. “Three minutes into it, we were whisked away to a production meeting. The plant manager called us over. We kept a respectable distance and he said ‘Come closer.’” With surveys in the bin and cameras in hand, the group was invited into team meetings, offices, the manufacturing floor and the tooling workshop. They left with a list of potential improvements that were quickly implemented and never would have been discovered without design research techniques. “The benefits really became clear to us when we began doing user-centred design. It related specifically to ourselves and the problems that we have had,” said MD, Felim McNeela.

The first tangible addition was a redesigned mould manual for all customers, along with a quick-start guide (laminated for durability and stain protection in the tool room) that could be used without wading through an A4 lever arch file. “We were providing a manual as good as our competitors. When we were shown everything on the table and able to cherry-pick the best from each, we were able to deliver a mould manual they said was the best of them all,” states Forde.

“Our communication is better with our customer. We’ve always listened, but we’ve taken it to the next step.” The first visit was so successful, that Avenue completed a further three visits to customers in Ireland and the UK. “The best way of summing it up is one customer at the end of the day said this is something we should be doing with our own customers. Can we get on the programme?”

Taking photographs made insights visible to a wider internal audience than just the few staff that made the visits. “Everyone is more aware in the place. We had a meeting of everyone and fed back the customer comments. The pictures are great evidence. You can keep going back to them. I can describe what I had seen over and over and you wouldn’t get it, but as soon as I show you a picture of how the guy organises his manuals. There it is. Also it’s apparent how we need to try and stand out from the rest,” says Forde.

LIBRARY  
EOL  
5/10/05  
ADAPTOR  
BODY  
FAT SAMPLES  
12/13 July 05  
ADAPTOR BODY  
12/13 July 05





The whole approach to how we manage customers has improved significantly, particularly at the early stages of developing a relationship.

# From first impression to lasting impression

Avenue mapped their entire selling process and began to consciously “make value visible” by designing how customer visits would work and selectively designing bespoke materials for each potential customer. “To me that was the best outcome from the programme. It provided a structure. We were under-selling in small and not-so small ways. Perhaps we were letting the customer manage us as opposed to us managing the customer,” McNeela explains.

When looking at a customer relationship as creating a first impression to a lasting impression, details as mundane as greetings by the receptionist and how

the reception area is received become possible points of differentiation. “There was stuff there we wouldn’t have generated ourselves, or had an awareness of. The whole approach to how we manage customers has improved significantly, particularly at the early stages of developing a relationship; the story we tell at the start and the story we tell over the course of our relationship and how we manage their interaction with Avenue.” The user-centred visits, which at first were an experiment, were now a requirement at the beginning of all new customer relationships and as a regular review with existing customers.

The service map also highlights the importance of each individual within the organisation, as they all are potential touch points for the customer. During tours of the factory floor, Avenue can highlight the specific skills of their people, perhaps their most valuable asset. “It’s not just top management,” says Hodson. “Now the toolmakers, designers ... all tiers know what they do affects the customers, even cleaning, marking, polishing, finish. All the different levels are brought into the process.”



We would have already been proponents of good design at Avenue, but our definition of design has expanded to include service.

# Design is an investment worth making

Speed of implementation has been hampered by the departure of some key staff. Avenue has increased spend against design despite weathering an economic downturn and softening sales. Managing Director Felim McNeela sees the benefit in investing against the new selling process. “We would have already been proponents of good design at Avenue, but our definition of design has expanded to include service. The market itself is changing and what it is looking for now is slightly different to what we thought it was looking for two to three years ago. We are focusing on our core competencies.”

Avenue contracted Donegal design firm Carton LeVert to help realise a system of collateral to support the selling process with customers. This isn’t the first time Avenue has turned to a design consultancy for brand support though the programme in McNeela’s view has provided a “more focused and specific brief this time. (We are) far better prepared.”

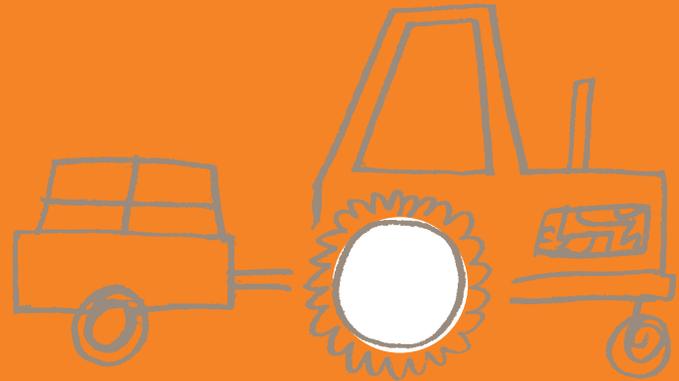
The programme has already yielded positive results around internal processes (selling, managing and tracking design changes, customer review); improved company culture through communication and involvement; and produced a well-received new mould-manual and quick-start guide. Many employees

agreed “that Avenue already had good relationships with our customers, but this took us to the next level.”

McNeela had an expectation at the outset of the Innovation by Design programme that it would be of benefit to the company and is confident that this new approach to delivering service would make them more competitive, grow new markets and help Avenue sell on the basis of added value and innovation as opposed to price. We look forward to revisiting Avenue Mould Solutions in twelve months to better measure the quantitative returns on implementing these changes.

# CASE STUDY

# 2



# Connacht Gold

Connacht Gold was established in 2000 by the merger of North Connacht Farmers' Co-Operative Society (NCF) and Kiltoghert Co-Operative Agricultural & Dairy Society Ltd. The business is split into a number of divisions: retail sales and foodservice, dairy ingredients, livestock and property marketing, agribusiness, property development and financial services. The Retail Sales and Foodservice division has an ambition to be the number two in retail milk and specific butter segments through continual development of the Connacht Gold brand and strategic new product development.



People will tell you in a consumer group what you want to hear.

# Have you really looked?

The question posed by Connacht Gold when selected to take a part in the Innovation by Design programme was “how do we de-commoditise milk and butter?”

The user-centred design workshop highlighted the difference between market research and design research. Connacht Gold had employed focus groups, but had never engaged directly with the consumer by observing their behaviour at the shelf. Pat Cummins, Research & Development, agrees that “if you see them picking it off the shelf, I think that’s more evidence there might be an opportunity there.”

Given that most shopping baskets are 80% the same week to week, what prompts a change of brand or product? Two teams led by Design Associate Jonathan Ball and Programme Manager Justin Knecht observed consumers at local Dunnes and Tesco stores to get some insight on shopping patterns.

“I thought that was very insightful,” said John Byrne, National Sales Manager. “Going forward, we need to get better insight into what is actually happening in the store. I think it’s even better than doing focus groups, as people will tell you in a focus group what you want to hear.”

Connacht Gold described their business as “essentially adding value to butterfat, milk and cream”. Gathering insights in stores was augmented by an in-home exercise, playfully named Fridge-to-Face. Connacht Gold employees, families of the Centre for Design Innovation and friends of the Design Associate followed consumer use of butter and milk products from the fridge and onto breakfast tables and into recipes. John Byrne recalls, “In the milk category, you’d look into the fridge and see high-value branded products like Tropicana and Innocent smoothies sitting beside retailer own label milk. How do you get people to see milk as not just a commodity?”



**The fact that students could do that is a massive achievement.**

# Build to think

Margins are thin and investment is low into developing new products, so a project was arranged between Connacht Gold and fourth-year industrial design students at the Institute of Technology Sligo. The creativity and design innovation course is one of the few product design programmes in Ireland. The course runs over four years with the students encouraged to work closely with industry on 'live' projects whenever possible.

The six-week project challenged the students to look at packaging for both milk and butter, based on user-centred research, that could be launched in 12 months time using existing packaging technologies with minimum capital investment; and also packaging for launch in three to five years time that

would stretch the sector conventions. Both approaches would have to take account packaging materials and brand guidelines given at the initial briefing by Connacht Gold. All proposals would be for mainstream production. Robert Hosey, Technical Manager, agreed "we gave them a fairly difficult brief. Very narrow constraints."

Connacht Gold Retail and Foodservice arranged visits to the dairy and to current packaging suppliers. The design students completed additional fridge to face photosets; evaluated the competitive landscape at home and in the UK; and investigated emerging trends in the dairy and food sector. Connacht Gold came back to the college for a presentation of the research. Pat Cummins and the rest of the Connacht

Gold team were already impressed. "You get radical independence from the students. You get a completely unbiased, different view of it."

At the final presentation, students presented highly finished prototypes. One silver carton was used in store alongside competitive products for testing preference by the design team. "One woman put it in her cart and liked it so much she didn't want to give it back." Estimates of manufacturing costs and retail prices were provided. "The amount of work they put in was beyond what we expected," said Byrne. "Almost finished packaging from concept to the table. The fact that students could do that is a massive achievement."



Connacht Gold

PASTEURISED

FRESH MILK

HOMOGENISED

Connacht Gold

PASTEURISED

LOW FAT MILK

HOMOGENISED

Connacht Gold

FRESH MILK

Connacht Gold

FRESH MILK

Connacht Gold

FRESH MILK



It takes more than a good design to get a product to market.

# Good design is not enough

Connacht Gold believes the nature of product development in the food sector offers unique challenges. The ability to innovate is also limited by capital investment. Pat Cummins says, "The food industry is a good bit different than the engineering industry, for example. The first priority is to maximise the existing resources as it is not often feasible to change product shape and designs on a regular basis."

Diarmuid Timmons, chair of the industrial design programme at IT Sligo reflects, "The students learned an invaluable lesson. Although they came up with excellent designs and solutions that staff members at Connacht Gold and consumers in supermarkets were

impressed with, none of their ideas were implemented. They learned that it takes more than a good design to get a product to market. Consumer sentiment and the all important views of the supermarket buyers influence the launch of a new product or the re-branding of an existing one. The project gave them an excellent lesson in design for a low-margin, high-volume business such as the dairy produce industry."

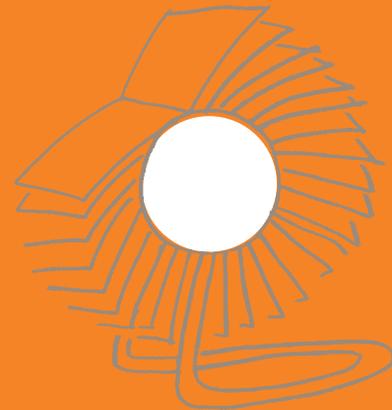
Even when a good idea reaches the market, it's not the consumer who always gets the final say. Cummins states "the reality is that new food products have to make sense not alone to the consumer, but to the distributor, the retailer and the manufacturer; and good products can fall at any one of these fences."

The team reports the programme has had little to no effect on the business to date, but John Byrne is optimistic that "the key learnings will be implemented, as we approach NPD differently." Byrne did complete a visit to the UK with Design Associate Jonathan Ball to perform in-store research for a potential export opportunity.

The team found it difficult getting broad buy-in within the organisation. Individuals were "not seeing the value the programme could bring outside the everyday chores which have to be done as part of your job. Again it's about culture; you need to go and grow a culture of innovation."

# CASE STUDY

# 3







Once I started attending the workshops I knew it wasn't just about how things look. This was about everything we do.

# People do things they will never tell you

Infacta is a holding name for other brands and has limited recognition and meaning outside of the Irish market where 99% of its income is generated. Infacta's Vice President of Marketing, Robert Martin, assumed management of the company's involvement on the Innovation by Design programme. "We had a number of different products and no consistent branding on our products or throughout our organisation. People didn't know Infacta from GroupMail."

The first user-centred design workshop did more than expose Infacta employees to new tools and techniques to understand their users, it changed their perception of what design meant. "Once I started attending the workshops I

knew it wasn't just about how things look. This was about everything we do. How our actual products work. How do our customers use the product? How do they find the products? How usable are the products? Is it easy enough for them; simple enough? From the very moment ... I know you call them touch points ... they get in contact with us to buying it, downloading it, installing it, using it. It's all about that, not just say, how our website looks."

Martin agrees that workshops alone don't provide a lot of value. "The follow-up is so important because it becomes specific to your business. You can get these guys in to do workshops; you see them once and they're gone. The follow-up helped us set up how the

user-centred design work should go. The follow-up was really, really important."

Infacta had just begun development of a new software project, Miximo, aimed initially at volunteer sports management such as the GAA and rugby clubs. With new tools in hand, employees created a picture diary of volunteers performing registrations for the local rugby club and began inviting potential users of their software into the office to observe them performing tasks online. "We've gotten people in here and watched what they are doing on screen and used that in the design of the new Miximo project, but not only that, we're taking it and rolling it back to how our other products like GroupMail work."



One of the main legacies of this (programme) is our new brand and how our brand is perceived. We're going to completely re-work everything we have.

## Today's scope

- What is a brand?
- Why brand?
- Building a brand
- Brand to life
- Brand architecture
- Customer touch points
- Managing the brand
- Summary

Centre for  
Design Innovation

# Brand is a thousand small gestures

Infacta brought different employees along to all three workshops in order to expose as many staff as possible; from the CEO to reception. However, the penny dropped at the branding workshop. “Every workshop was excellent, but one in particular was the brand touch points. It seems so obvious, but made so much sense. You’re like, damn, these are so important. We need to sharpen our game up here.”

In the days following the workshop, in true Internet time, the Infacta team quickly contacted an established design agency to draft a brief for a total re-brand. Martin reflects “that was a mistake on our part, but we had good feedback from other companies and we’re like ‘Why do we need to waste time vetting other companies?’ We went ahead and did it, but their first

document left us completely flat. We went back (to our Design Associate) and did it the proper way. Helping with the design brief was key. We had no experience with that.”

After creating a written brief internally, Infacta sought proposals from five Irish and one UK agency before choosing Donegal-based design firm, Carton LeVert. “One of the main legacies of this (programme) is our new brand and how our brand is perceived. We’re going to completely re-work everything we have. We’re going to have complete consistency.”

It was clear after some initial work that the company name needed to be changed; a difficult task on its own but being an Internet-based company, made even more so by having to secure a .com name. “100% of our customers

come through our website. The domain name is critical. This cannot be underestimated.”

Infacta and Carton LeVert kept employees involved throughout the process. “We had a workshop with all the employees and they got a better sense of the whole. It was great for them to see what we were trying to achieve; how design affected not only marketing, but products and customer service. I think everyone realises now that there is something in this.” The new company name hasn’t been determined yet, but “there are some great names floating around.”

Martin pulls out a big brand comparison to make his point. “Apple didn’t just wake up one morning and have all this cool stuff. Their brand is always the same. When you see something you recognise it is an Apple product.”

The user doesn't care about the technology, it's the front-end they care about.



# It starts (and ends) with the user

Customer support was already considered a key point of differentiation for Infacta, though Martin admits, “after going to the workshops, we saw that there were still areas where we could improve.” The culture of the organisation is showing significant signs of becoming even more customer focused.

Infacta are trying to get more feedback continuously from customers now to see how they use the software. “Over the past few months we released a beta of our GroupSurveys product. We sent out some emails, ‘Do you mind if we give you a call?’ We got some feedback on the actual steps to create a survey. Changed the layout. Users came back and said ‘Fantastic. The new layout is far easier and simpler to use. We can’t wait for the release.’”

Not only are Infacta consulting with customers, they’re also talking to the rest of their employees. Informal chats in the kitchen that might have been forgotten are now a little more structured. “Up to now it’s been, ‘this would be a cool feature.’ Meetings would be ‘should we go down this route or this route’ ... and now we don’t really care what route you go down as long as it makes it simple for the customer.”

Infacta already had an innovative programme in place where developers would field support for the products they were working on. The workshops reinforced the importance of putting users first. “All the developers now have more of a sense of ‘we need to focus on the users’ as opposed to just focusing on the technology. The user doesn’t care about the technology, it’s the front-end they care about.”

When new staff is hired, Infacta now treats it as an opportunity for a little research and customer insight. “The first thing we do is ask them to go purchase GroupMail online and download the software and watch what they’re doing. Before we wouldn’t have watched them and taken notes on certain things they were doing.”

Taking time to integrate design research into the development process has had an effect on time to market. “The one problem is it has taken us a lot longer to get where we’re wanting to go. The way we used to go was just to release stuff, get feedback and then make changes. Now we’re looking to use (user-centred) design before we create the first release of the product. That’s a slower turnaround for us.”



OK, this is not about design, this is about our whole company.

# An investment in design is a good investment

Infacta believes that lots of small things add up to a good overall user experience. “We’re looking at how to change a lot of the small little things we do to make us appear nicer to customers. Even small little things like our auto-responders that tell people you’re in a queue and we will get back to you. Let’s make it a little more friendly.”

Involvement on the programme has already contributed to developing new products and services and Martin believes that this approach will help Infacta be more competitive and develop new markets. Customers currently buy their products mainly on

price, but “once we get things right” he expects the company to be competing more on added value and usability.

Their investment in design has increased significantly. They have even hired their first in-house designer. “In the past we would have hired another developer.” Infacta are now working with an established agency on branding as opposed to turning to a smaller outfit for logos as they might have done in the past.

Martin claims “the whole thing that you’re doing here is changing our company. Not just our marketing, but our development and the customer

service we offer. In the beginning we thought it was about design, and then we realised, ‘OK, this is not about design, this is about our whole company, this is our whole strategy, this our whole business plan. It’s changed the design of the Miximo project. It’s changed the way we design products in the future. It’s changed the whole company branding, in that we’re changing our name. It’s heightened our expectation of customer service.”

Our interview ended with an invitation. “I’d love in a year’s time to come back and talk about how Miximo goes.” Offer accepted.

# CASE STUDY

# 4



# The Institute of Technology Sligo

The Institute of Technology Sligo is one of 14 similar third-level institutes within Ireland. There are currently 5,400 students attending the college, roughly broken down as 3,500 full-time, 1,100 part-time and 900 apprentices. The Institute is the fourth largest in the country and delivers programmes at all levels, has been in existence for 37 years and employs some 800 full-time, part-time and special purpose contract staff.



It gave us tangible tools day one. Let's start by giving the students cameras to record their first impressions.

# Understanding your customers

Registrar, Brendan McCormack, saw the Innovation by Design programme as “an opportunity for the registrar’s office to become a better service provider; taking the view of the student as a customer and the staff as customers. While we believed we were doing a good job, were we thinking as service providers?”

The Centre for Design Innovation is conveniently based on the Institute of Technology Sligo campus; so thirty members of faculty and staff were able to attend a rehearsal of the user-centred design workshop. The registrar’s team had the benefit of attending the workshop twice. “It gave us tangible tools day one. Let’s start by giving the students cameras to record their

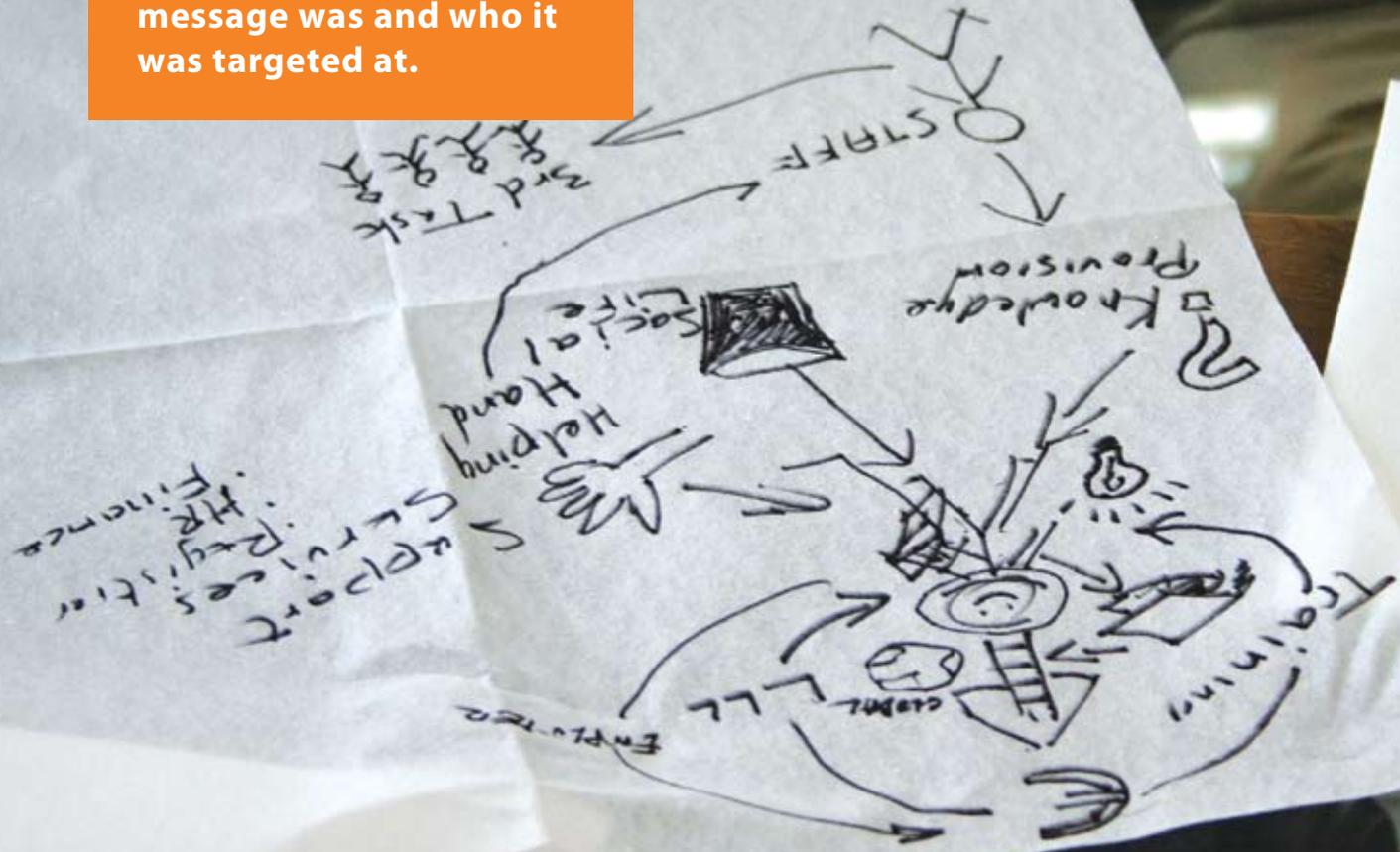
first impressions.” And that’s exactly what they did. Cameras were given to students during registration to see the college through their eyes.

“One of the big eye openers for me was that in the past we’ve always tried to work to make things as efficient and effective as possible for us, but then we realised through the photographic journal and other ways of looking closely at our customer; they may want other services we were not providing. For example, we discovered that we need to spend more time explaining how our systems work in order for the customer to get the best value from our services,” recalls Dara McGoldrick, Schools’ Liaison Manager.

The registrar’s team expanded their research to include the website, signage and reception areas, as well as collecting prospectuses from other colleges. They consulted with the community, industry and press to understand the external impression of the Institute.

“The user-centred aspect forced us to get out of our nests here. We jumped across the counter and said ‘well, who are you’ and ‘what are you thinking’ and ‘what’s your view of the world’ and ‘why did you come here?’”

We didn't know what our message was and who it was targeted at.



# A brand is not a logo

McCormack remembers “when the evidence came in; when we laid out all the prospectuses; when we looked at the photographs our first-year students took; and the signage; that was the moment. The user perception of IT Sligo was one thing. Our perception of IT Sligo was something different. We didn’t know what our message was.” The project team was convinced this wasn’t just about the registrar’s department anymore and brought members of the Executive Committee to a brand workshop in Dublin to introduce them to the concept.

The registrar’s team pulled together a room displaying all the research that had been done to date for a presentation. Photos lined the walls. All the collateral from the college was pulled together. One member of the Executive remarked while walking around the room, “This

is unbelievable. I’m thirty years in this business and if you can change me, you can change anyone.” The college committed to the project and an initial budget of €50K to create the new brand.

“The fact that we could get together and make a case to the Executive, was quite an achievement (for the team) in the current environment. Here we were in the public sector talking about brand in front of the Executive Committee. It was quite a significant step forward.”

Design Associate Gavin Pryke was determined for the college to find the right agency and after short-listing five agencies out of 19 submissions, arranged visits to all of them with a team from the college.

Catherine Kennedy, of the Director’s office, was assigned as Project Manager.

“The normal tendering process is you get the documents in and you pick from those. We could have gone ahead and done that without advice (from the Centre). However, we learned an awful lot from going to visit the companies.. We are very happy with the company we chose, and we probably wouldn’t have selected them had we not gone to see them. On paper you get caught up on the price.”

“The turning point was when the agency said ‘you’ve got to be brave.’ That was it. This company had the right attitude.” Conor Clarke, Director of Design Factory, remembers saying those words but also recalls that “somehow they arrived at our doorstep with an open mind. Normally people come in the door and are closed about the possibilities. It allowed us to challenge them even more.”



People, in a way, had already been living with the brand for a couple of months.

Genie GS

# It's about your users

Getting approval for the project was a significant milestone. The next challenge was getting agreement on the final brand identity. Project Manager, Catherine Kennedy felt “the hardest point was where to draw the lines of consultation. You’ll never get everybody in the IT. If you want to get work done and make progress you can’t ask everybody’s opinion and take on board everybody’s ideas. That was a hard line to draw.”

The agency worked with the college to develop a banner campaign, but these banners were building-sized and unable to escape your notice. One was hung in the parking lot; another in the lobby of reception; and a third in the canteen.

There was no explanation. They just appeared. “The first brave thing the college did,” says Clarke, “was the banner campaign; the excitement, the intrigue, the banter and the chat. By the time we were doing the final delivery at the staff conference, people, in a way, had already been living with the brand for a couple of months.”

Kennedy recalls “when the banners went up, the student union president said he always felt reception was like a prison, and finally, it didn’t look like a prison.”

Along with similar, smaller posters scattered throughout the college, Design Factory and Design Associate Gavin Pryke held a series of

presentations throughout the college with key stakeholders, faculty and staff.

If you pick up a prospectus from any number of institutes or universities, chances are you’ll be greeted by its President espousing what makes their college the best. The focus is typically on the institution itself. The messages coming out of IT Sligo were now all about the customers of the college.

The general response from the staff according to McCormack was “Yeah, of course it is about the student. I’m glad somebody finally said that.”

# WELCOME TO ITS

A background photograph of three young adults sitting on a light-colored bench in a bright, modern interior. From left to right: a woman wearing a black beanie and a colorful patterned scarf, a woman with long brown hair wearing a white patterned sweater, and a man with short dark hair wearing a brown jacket. They are all looking towards the camera with slight smiles.

**I think it will raise our profile nationally. The brand is strong enough to do that.**

# Measuring success

Demand for third-level placement is static. The supply of courses being offered nationally to new students is increasing dramatically, which means increased competition. The college has already delivered upon two success measures for the project: differentiating itself from other Institutes of Technology and consistency of communication. Whether the brand can help increase first-preferences and non-traditional students remains to be seen. "It's very hard to measure its effectiveness. That's one of things we asked when we went to the agencies. 'How can you prove what the brands you introduced have delivered for your (client) companies?'"

Dara McGoldrick, who will be managing the brand internally is optimistic. "I think it will raise our profile nationally. The

brand is strong enough to do that if we keep going with it."

Some may question whether education providers should concentrate on teaching and leave the design and branding to business. Padraig Cuffe, Academic Administrator & Student Affairs Manager, is more pragmatic. "I think it has to be viewed as a business now, within the context of who we are and what we do with our customers. We're there to make sure that the whole entire experience for the individual, the student in particular, is positive. That is all linked into the design, and so on, of how we do it."

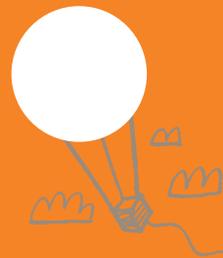
The new brand is the tangible output of the programme, but changing mindsets in the public sector cannot be underestimated. Library staff grabbed

the designers to speak about how they could improve the atmosphere in the library through branding. "To get any of their services across to a student; they're becoming more visually aware and conscious on how they are seen," said designer, Julie Mitchell.

McCormack sees staff using the design techniques moving forward. "We have life-long learning students. I would like to see us begin to use techniques to understand how they interface with the learning process. It's a change in attitude, and perhaps it's a small group of those involved, but rather than thinking I'm a public servant, sitting behind my desk, filling out forms; we should have a direct relationship with the customer. Seeing what we do through the eyes of the customer."

# CASE STUDY

# 5



# Ireland West Airport Knock

Ireland West Airport Knock was established in 1985 as Horan International Airport; the brainchild of Monsignor James Horan, Parish Priest of Knock. A group of key supporters had the extraordinary vision to build an international airport that to many seemed unrealistic and unattainable. In 2006, the airport was re-branded from “Knock International Airport” to “Ireland West Airport Knock” as an indication of the airport’s strategy to become recognised as an international airport on a global scale and to act as a signifier to the location of the airport as the main airport in the West of Ireland.



# Mapping the customer service experience

Ireland West Airport Knock serves more than 20 scheduled and charter destinations across Ireland, the UK, Europe and beyond and has broken ground on a new €46million infrastructural investment programme, including a new terminal expansion. The airport surpassed a half million passengers in 2005 and plans to double that number by 2010.

Robert Grealis, CEO, recalls joining the Innovation by Design programme “as an opportunity to step back from the day to day business; to get an overview and get a different perspective on it, and also to bring in a new concept in terms

of how we evaluate different parts of our business, and in this case, that being design. For certain individual managers, me included, it would also be an opportunity to apply a totally different process to the business. An accountant, by training, wouldn’t look at things from a design perspective.”

Following the user-centred design workshop, the entire management team worked with Design Associate Gavin Pryke to map the entire customer experience journey from when someone decides to fly, all the way through to leaving the airport after arrival. “The most valuable part was the whole

customer journey mapping exercise and the design tools we’ve used to undertake our research.” The team prioritised three areas to investigate further as potential projects: Queues, family user experience and premium customer services. User-centred tools and techniques from the workshop were identified by the team leaders to help gather customer insights on their projects.

Grealis announced that “design and this project will be on the agenda of every management meeting.”



Seeing what customers do first hand is much more powerful than being told what customers do.

# Putting yourself in your user's shoes

One of the benefits of working alongside your customers, is you have great accessibility to them to do design research. In order to investigate families travelling with children, three tables were set up in the upstairs airport lounge with crayons, paper and instructions. The tables were monitored by airport staff and adults were free to leave their kids to do the activity. Children drew pictures in response to three questions: What do you like about travelling through the airport? What don't you like? What would you like to have at your favourite airport? Tables filled up quickly and one parent remarked, "I think it is great that the airport is doing something like this with the kids in order to keep them occupied."

"Our ability to look at problems in a slightly different way has improved; particularly the way we've evaluated the passenger experience has opened our eyes." Other staff created photo journals of families travelling with children in arrivals and departures and others recorded personal inventories of what families had packed for travelling with children. Staff member, Orla Gibney, was taking photographs. "Seeing what customers do first hand is much more powerful than being told what customers do."

The airport has implemented a number of improvements to address premium customer services and removing queues. They trialed loyalty cards and are incorporating a business lounge

into the new terminal design. Though becoming queue-less is a long-term goal, check-in queues were re-aligned. "It isn't pretty, but functionally it's worked and it's worked because we went through the passenger flow process. The best example of that is last Saturday we accommodated 3800 passengers, a record day, but the building was designed to handle 1500 passengers a day, no more."

A re-alignment of passenger screening gave people a lot more room and time to get their belongings into trays. "Design has raised the bar on what's ideal for us. Two or three years ago we would have been overjoyed with the re-alignment of the security screen. Today it's helped, but our bar is much higher."



**The long-term solution still is the design of a cart that serves an airport user rather than a cart that's just designed to hold bags.**

# A prototype is worth a thousand pictures

Design Associate Gavin Pryke captured a video of travellers struggling to release stacked luggage trolleys while waiting for their baggage. He brought Carmel Kilcoyne, Operations Manager to arrivals to see what was happening first hand. She knew there was a problem with the trolleys, but hadn't realised the extent. Something needed to be done. The airport made an investment in 200 trolleys just two years earlier, hoping they would last ten years.

Ireland West Airport Knock turned to the industrial design students at the Institute of Technology Sligo for a solution. Third-year students Marc Torrades and Alan Harrison were assigned to a summer placement to fix the faulty 'sticking trolleys' and to develop proposals for innovative trolleys. "Having to work in the real world in real time and with

real deadlines puts the right sort of pressure on the students to produce the goods. The interaction between the client, manufacturers and the end user familiarises them with a good template for working that they will use again and again," says Diarmuid Timmons, Program Chair, Creative Design and Innovation, IT Sligo.

Within four weeks the two students presented five costed and prototyped solutions back to the airport. One alternative was a simple, no-cost and ready to implement resolution. "Just have someone separate the trolleys when they are returned to the bay." Applied design thinking at its finest. Consider the students came up with five potential fixes to the design flaw of the cart that the manufacturer did not incorporate.

At the end of four more weeks, the students presented three prototyped designs to the management at Ireland West Airport Knock for trolleys that could offer a better experience to families travelling with children. One concept was a sustainable design, potentially made without metal that might provide customers the benefit of taking their trolley through security with them. "It fits with our values around the environment. Whether it's feasible, we need to see. We've seen the wear and tear on metal carts. The long-term solution still is the design of a cart that serves an airport user rather than a cart that's just designed to hold bags."

The airport is currently exploring options for how they might work with the college to help bring a new trolley to market.



**Design is now part of what we do as a company, not just what marketing might do or finance might do.**

# Concept to capability to culture

In order for the airport to reach its goal of a million passengers by 2010, it needs to be the traveller's choice within its West/North West catchment area. Annette Kearny, Marketing Manager, believes a customer-focus is key. "The customer is the focus. Because the programme was user-centric, that message has got right across the board to all managers and they're all looking at how we can improve the experience and obviously, by default, improve our own market position. That has achieved more than what four years of lectures could have achieved. It's moved parameters away from traditional thinking of design as being graphics and brand image and, to an extent, architecture to designing a business around the customer."

"It's opened up the team to being more creative and allowed some outside the box thinking which we would have never facilitated really, as much as we think we do." Kearney does highlight one challenge to their potential ability to designing service; a lack of service design expertise in Ireland. "I think the difficulty will be in the practical implementation of designing a service as opposed to a product where you could get a hundred different designers and advisors to tell you that you need 'this gadget to fit in that yoke.' So the whole thing on guidance on implementing service; there wouldn't be as wide a choice of people that you can call on."

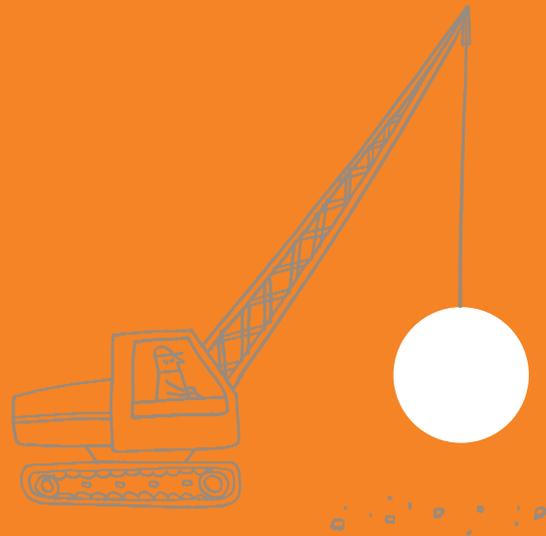
Although the programme has "opened us up to potential solutions we wouldn't have considered previously," Grealis

reports "implementation has been hampered by acquiring planning permission for the new terminal design. The planning process in Ireland had a major impact on us being able to implement solutions. 80% of the changes rely on the new terminal design being in place."

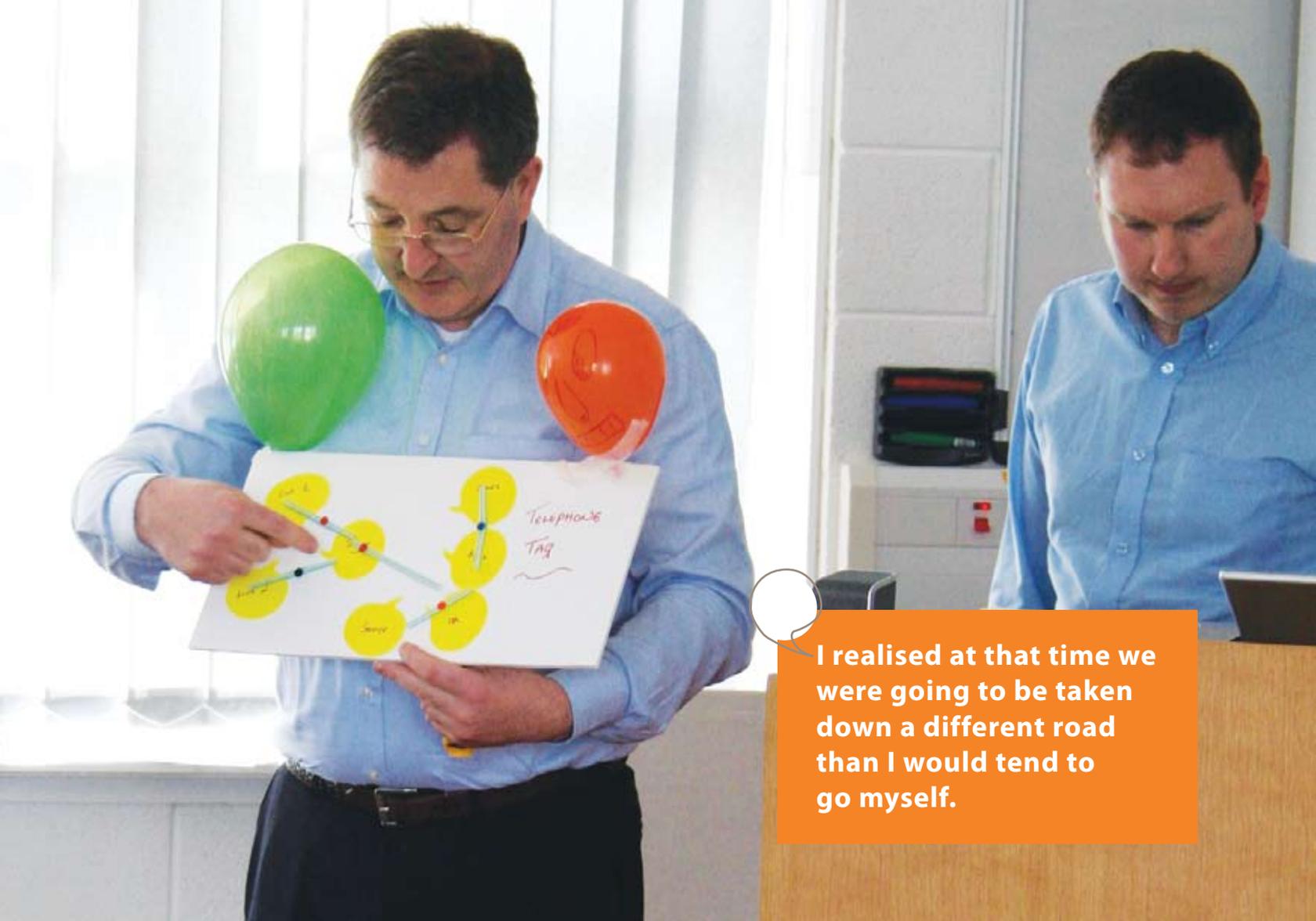
However, a cultural "shift has occurred at the management level. It's now in the conscious, so that if we are looking at a change, how that change is going to affect our users, and therefore, how we design that change is far more up the ladder than it was before. Design is now part of what we do as a company, not just what marketing might do or finance might do. We probably thought we were a lot more customer friendly than we actually are, and that's something we need to build upon."

# CASE STUDY

# 6







I realised at that time we were going to be taken down a different road than I would tend to go myself.

# It's not what design is, it's what design does

"I went into the programme to address an issue we had with the company, which was, whether we take on design here." From the first workshop on user-centred design, it was clear to McMenamin that this was a new and different approach to design than he knew as an engineer. "Design as I saw it, and what my perception of what design was, and what it would be for Mantis, compared to what I've learned (on the programme) would be totally different. And that would be a positive. I realised at that time we were going to be taken down a different road than I would tend to go myself."

The marketing team went into the field to observe operators using cranes along with Design Associate, Gavin Pryke. The design and production team observed the erection and takedown of cranes looking for insights into possible product improvements. McMenamin went to interview customers, a process he "wouldn't have done before." The research identified potential product improvements and perhaps a new market opportunity "that came back directly from us getting the customers involved in the design process."

"I went myself to a number of customers ... if we could write this (spec) again, what would you like to see? I went and talked to a customer in Scotland who has two machines from us and the feedback was quite good. I got a few

bits and pieces from him. The main (insight) I got was (from) a guy that runs a fleet of mobile cranes in Dublin. I was there with him a good part of the day. I came away realising there was a possibility of two versions. Some of the things he wanted the standard customer would not pay for. The ordinary builder out there would be looking at the price and weighing up cost as opposed to the value of the machine, whereas the likes of the mobile crane guy who is used to paying a lot higher figure for an equivalent machine, would be prepared to pay extra money to have things to make it easier for the operator, for the handler. In other words, there were a number of things he mentioned, and the budget may be 20-23 thousand euros, he would probably pay for that because to him the cost of the machine as

compared to an alternative is favourable. There's two markets out there as opposed to one market. There's two different types of customer, that could take a standard model or could take an upgraded model that they're prepared to pay for."

McMenamin cautions that you better be prepared to take on what the customer tells you. "The one thing about doing this is it's an unnerving process in a way, because if you're serious about it and you can make some of the changes that's grand. If you can't do some of the changes ... that part of it is difficult."

Also, choosing the right ideas is more important than coming up with good ideas. After initial observation in the field watching crane operators use bulky controls that required frequent repair and replacement and weren't considered user-friendly seemed like a potential opportunity. The existing controls were manufactured by a third party. Perhaps Mantis could design and manufacture a better remote control. No pun intended but "we focused our time on something we had no control over, and a lot of that focus was lost. We concentrated our efforts on the wrong activity." In this case, we (the Centre) could have listened more to our own customer, Mantis Cranes.



**We focused our time on something we had no control over, and a lot of that focus was lost.**



They were the first genuine workshops that I'd ever been on in a training programme... we were actually doing the work.

# All touch points are not created equal

Robert Rowlette joined Mantis Cranes as General Manager at the beginning of 2008. "I was aware of the programme and what was in it before I joined here. It immediately became apparent that there was a little bit of a mismatch between what we expected from the programme and what it actually could give."

Following a brand workshop that introduced the concept of customer touch points, an extended Mantis team came to the Centre for Design Innovation offices to map out their service offering. "They were the first genuine workshops that I'd ever been on in a training programme. Normally you go in and you're sitting there, but we were actually doing the work. We were guided through a process, and we were made to work. And there was

no hiding. The stuff was being dragged out of you and we know more about this business than any outsider will ever know. Once we got on that track with the programme we got the customer contact mapping points which is a very, very powerful tool and enabled us to do things."

McMenamin would be the first to tell you that "if we had been solely dependent on manufacture, we wouldn't be sitting here today. It's the service aspect and hire, that's keeping us here today." However, Mantis wasn't consciously managing the service experience. Critical customer touch points were identified, including the service engineers that had the majority of contact with clients. They were the face of the Mantis Cranes brand.

The service framework allowed Mantis to make discreet changes, like handling ready to ship orders, but perhaps the greatest changes were in the minds of the employees. The culture was changing. Rowlette illustrates the point with a story. "We were doing a job in Dublin putting up a tower crane and the project manager more or less said to the service guys on the site 'If your back-up in Donegal was as good as you, you'd be s\*\*t hot.' If you had said that to us four months ago, we would have been very defensive about it. Lets take it on board. What are the issues that are causing the customer problems and address those because that's one person who's saying it, and there are probably others who are thinking it and we're not hearing it back."

The Managing Director was not only looking externally for insight, but applied the tools to internal staff to see how the service experience could be improved. “We took the service engineers aside and asked what would make this easier for you?’ Not just the customers. Going to guys on the manufacturing floor and asking what’s difficult to manufacture? What should we be looking to change?”

“We always would have said it’s not just the crane you’re buying, but it’s us you’re getting. But we didn’t actually live up to that promise. Now having gone through the (mapping) exercise we’re more focused on it and the downturn in the economy has helped us focus a lot more as well.”



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We always would have said it's not just the crane you're buying, but it's us you're getting. But we didn't actually live up to that promise.

Right people involved  
at right time/stage

Know what we're doing

Be more motivated

More  
Clear

The project management tool for new product development has made a big impact.

Value to Customer = €

## Benefits

Better products

Better planning

Reduce Costs of manuf.

Quicker - t.t.m.

Delivered on time

We'll be more efficient  
more focussed

More customer benefits

# Product development is a process

The last crane development project at Mantis took three years to market and they were looking to cut that development time at least in half.

McMenamin credits the programme for helping “to highlight some of the inefficiencies we had in the engineering department, and there were some serious discussions as milestones were laid out and none of them were delivered on.”

In order to get to a new product development process with buy-in from the organisation, Design Associate Gavin Pryke hosted another workshop with the extended team. Rowlette describes that “before somebody would have made a comment, it might have been someone working on the floor. We wouldn’t have had a mechanism for catching that.

Unless he had the opportunity to talk to Seamus it wouldn’t have been acted on, and even if they had, it wouldn’t have been actioned.”

With a draft NPD process in place, the team was tested by preparing a crane for a key national trade show in the UK. “The project management tool for new product development has made a big impact. I don’t think we would have done what we did. We had a very tight deadline for SED.”

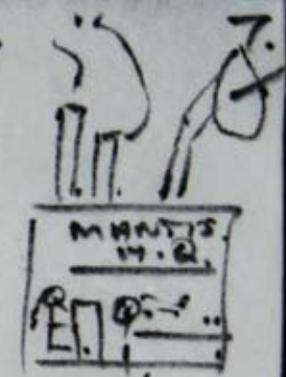
But has the combination of user-centred design tools and a new product development process resulted in tangible changes to the TC-25 crane? Rowlette reported that “everybody was given an opportunity to contribute and we ended up with an initial list

of 35 (improvements) and when we rationalised, there were 24 or 25 we would run with.”

The new TC-25 isn’t on the market yet but Mantis shipped a revised crane to their American distributor. “The feedback from them was quite positive about the changes. They were immediately apparent to them and we didn’t really think they would be noticeable, but there were certain ones they thought ‘yeah, we like this, we like this.’ And the other thing is there were changes they had thought about; that they had suggested; that they now saw in the design so it feeds back to them that they’re not just shouting in the dark.”

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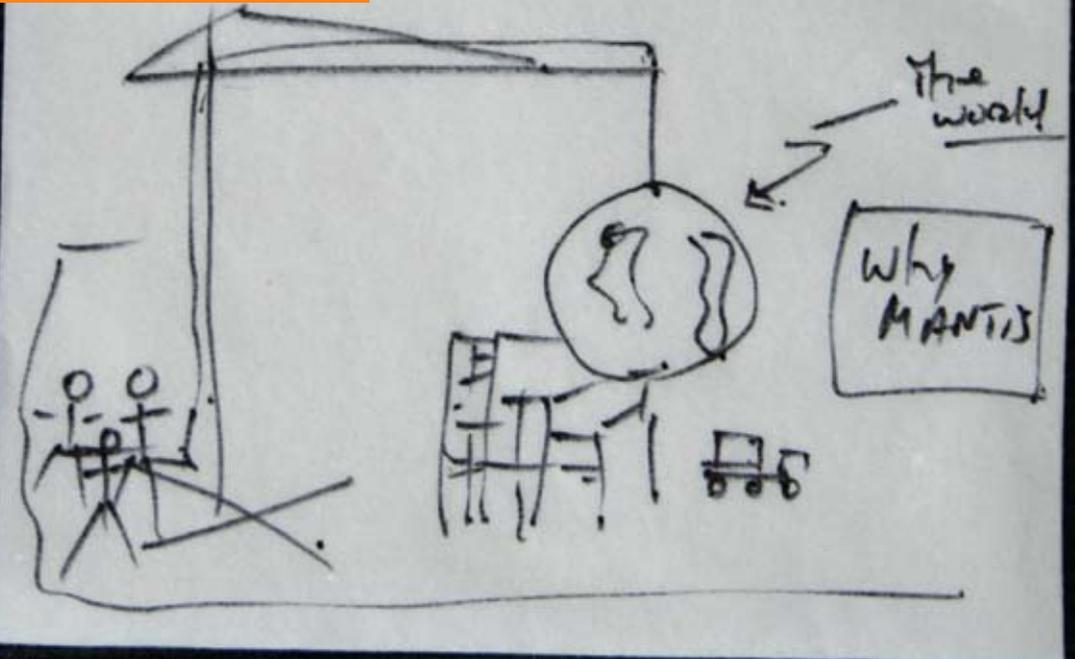
- TEAM.  
LIFTING SOLUTIONS.  
SERVING THE WORLD.



I would have taken design as a huge mammoth task, and it's not. It can be as difficult or as simple as you want it to be.

54

108  
100  
100



# Turn your customers into advocates

In the current economy, with the construction sector being more exposed, Mantis had to reduce design staff. They intend to replace that role and add a senior designer with elite experience against their in-house design objectives. "The market failed. That has affected everything within the company. And it has also affected the programme for us. The productivity we hoped to have, we have pulled back. Our concentration has shifted from, I suppose, a company looking forward to, for a period of time, to consolidate," says McMenamin.

When the economy begins to pick up again, Mantis expects the new tools and approach to help them enter new markets. The ongoing improvements to the TC-25 crane will make Mantis more competitive and less sensitive to price pressure. "There's been quite a number of changes both implemented and to

be implemented in relation to the new crane. It will be more user friendly for the customer, and more friendly for fabrication and service. Lead times have been reduced and that goes back to the fact that we now have a formal design management tool for doing it."

Time was spent against logo consistency on product and marketing materials. The newly designed corporate brochures and pamphlets have changed to reflect the language that came out of the service mapping process. Mantis turned to their Design Associate for help on the design brief to get their website redesigned. Rowlette said, "Gavin, with the website brief, was pushing us. We got good help there."

Rowlette believes "everyone that has been exposed to the programme, and there have been a wide number of people, it hasn't been just Seamus

and myself, but people from the sales side, engineering, production, finance; they've all become sensitised to design which I don't think would have been there before. They're aware of issues and how they impact on customers and the consequent knock-on effect that has coming back to us. Things like paint quality; we would have looked at from an engineering viewpoint, than from a design or service thing."

In the true sense of turning customers into advocates, the best design endorsement comes from Managing Director, Seamus McMenamin who is working with active members of Donegal Engineers. "They keep talking about new products, but still have the perception of design that I would have had before the programme. I want to employ someone for 18 months to two years to work individually with these companies. I just need to get the funding."

# About The Programme

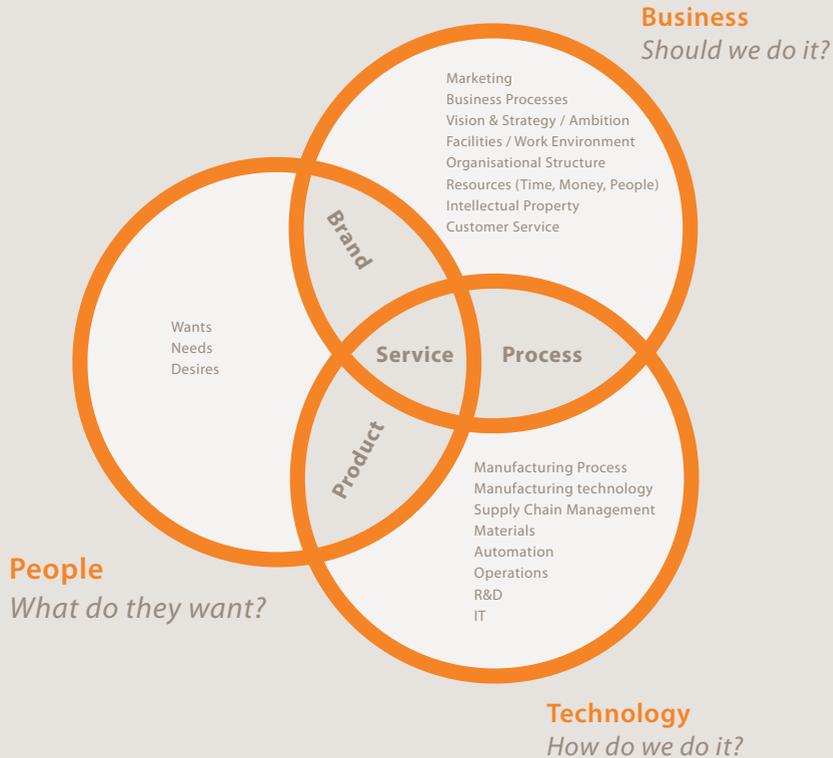
Innovation by Design is not the first design in business intervention programme, yet it is unique in taking a user-led approach to innovation. Few companies put themselves in their customers' shoes, even though the best way to develop successful products and services is to understand users' needs first. This is what is meant by user-centred design.

Unlike other programmes, companies learn by doing it themselves. The Innovation by Design programme transfers design thinking skills into the participating companies through highly interactive workshops, practical application and individualised support, as opposed to just partnering up a company and a designer.

Participants attend three workshops in total. The first on user-centred design is the cornerstone of the programme, dispelling myths about "design" and providing easy to use tools to identify the right users; observe what clients actually do; involve your user experts; and prototype potential ideas. The second workshop is about understanding and developing your brand. It introduces the concept of brand touch points and the building blocks of brand development. A brand is not just a logo. The third workshop looks at service design and customer experience, providing a simple blueprint for how to design and evaluate service. Organisations learn to go from a first impression to a lasting impression. This is good business as customers

pay more for branded services and experiences, than commodities or products. Decks of cards highlighting key techniques and concepts from the workshops are retained by each company for future reference and use.

Following each workshop, the organisations apply the new skills to their own organisations with the help of a Design Associate. Design Associates have cross-disciplinary experience within multiple business sectors and design disciplines. This facilitation and mentoring is key to integrating new skills and participants can request strategic expertise when needed. Companies receive five days of face-to-face time over the course of the programme and the continuous

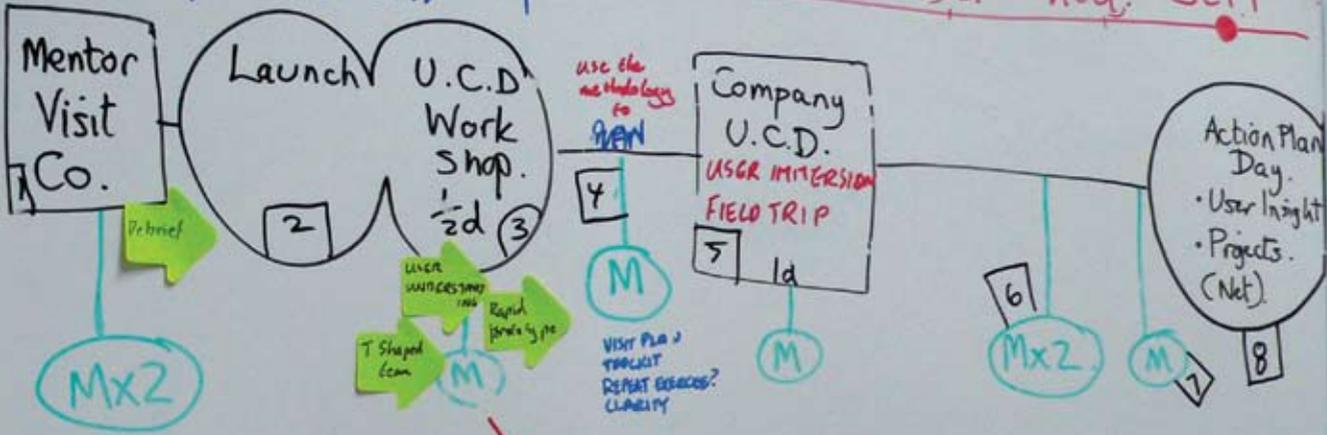


support of the Centre. On two separate occasions, all companies are asked to present a plan of action and progress to their peers. Participating companies provide support or just enough peer pressure when its time for a presentation.

Companies may approach the programme with a certain project in mind, though new opportunities are often uncovered. Implementation often requires professional assistance and companies are helped with briefing and selecting design consultants to see the projects through to commercialisation.

In the end, every organisation is equipped to use design as another tool for competitive advantage.

2 WEEKS | APRIL 2 DAYS | MAY | JUNE | JULY | AUG. | SEPT.



LOOKSEE  
LISTEN  
PROG. INTRO

NETWORK  
PRESS  
PROGRAM  
BUZZ  
SPEAKER

LITTEROWN  
WITTY  
VISUAL MODEL  
TOOLS  
DESIGN THINKING  
COMPONENTS

APPLY TO  
COMPANY  
DO VISITS  
+ OBSERVE  
USERS

ORGANISE  
DISTILL  
APPLY TO  
MODEL  
INITIAL OPPORTUNITY  
ASSESSMENT

HEADLINE  
PROJECTS

CAPTAIN'S LOG ← WHAT IS NECESSARY/SHARE  
WHAT STORY METH

SPACE  
+ CALENDARS X  
RELATIONSHIP BUILD  
VISUAL TOOL -  
(CHECKLIST?)  
TIME? 2 HOURS

TIME?  
NOT MEASURE  
DEPENDENT

MAY  
FIRST EVENT  
SCHEDULED

WORKSHOP  
ADAPT.

BRIEF  
DON'T PESTER!

VISITS  
METH/APPROACH

OPERATIONAL  
MECHANISMS

ENDING

PROXIES

## **Acknowledgements**

We would particularly like to thank the six organisations and all the individual employees who worked so hard over the past 18 months. At the Centre, we have learned equally as much by delivering the programme as hopefully you have by participating in it.

A programme of this size and scope is not the work of a single individual or even a single organisation. We've had the pleasure to collaborate with a number of talented people from around the globe.

### **Design Associates:**

Jonathan Ball, Gavin Pryke

### **Workshop development and delivery:**

Colin Burns, Richard Eisermann,  
Anja Klüver, Fiona Myles

### **Advice and consultation:**

Sally Brazier, John Buckley, Paddy Crowley, Ré Dubhthaigh, Keith Finglas, Deirdre Johnston, Seán McNulty, Alan Mumby, Frances Owens, Will Reese

### **Collateral design: Carton LeVert**

Special thanks to Brendan McCormack, whose initial idea and ARE application established the Centre; our funders, Enterprise Ireland; and the support of Deirdre Brougham, ARE Programme Manager.

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The Centre for Design Innovation is a centre of excellence for the research, understanding and promotion of the effective use of design and innovation. It is an initiative of the Institute of Technology Sligo and is funded by Enterprise Ireland under the Applied Research Enhancement Scheme.

Centre for  
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