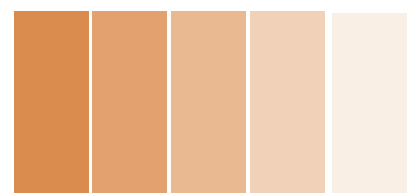
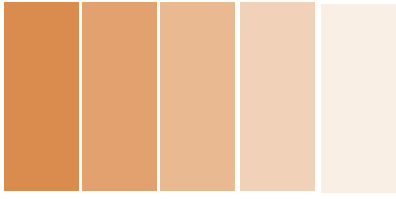


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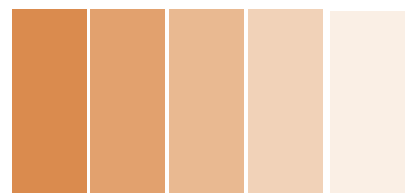
Information Design for Business

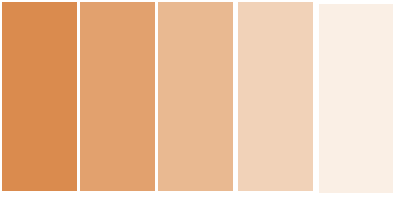
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Information Design for Business





What is Information Design?

Information Design (ID) is the art and science of structuring and organising information environments to help people effectively fulfill their information needs. In simpler terms, it is concerned with making information accessible and usable by consumers. It is an interdisciplinary science that combines the knowledge of typography, graphics, photography, illustration (from the Visual Arts), blends it with an understanding of principles of cognition, memory, channel capacity (from psychology), and then applies it within the framework of consumer behaviour (from marketing).

Design, from an etymological perspective, means “scribing”—gesture about how an organisation expresses its ideology, culture, products, and services. These assets are carefully guided so that the message is consistent and clear in all forms of expression. This coherency of message builds strength in the facilitation of strategic

organisational functions, such as marketing, sales, and operations.

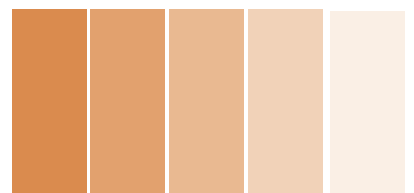
It's not the same as graphics design

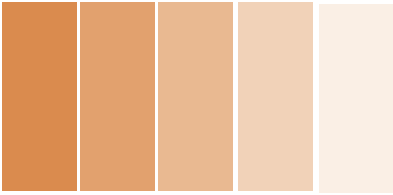
But information design goes beyond graphics design or visualization. Graphics design refers to information conveyed through visuals or graphically using graphic styles (colour, visuals, images, illustrations, typography, icons, etc) to information. Information design, on the other hand, concerns itself with how information is perceived and processed by an audience. It evaluates the impact not just of the graphic form, but often also of the actual content. This is done keeping in mind the psychology of the individual and the physiological environment.

Information Design plays a role in all aspects of an organisation's work. Products, uniforms, buildings, Web



Information Design isn't just about a logo or a brand name. It gets reflected in many other aspects. Here the menu design is not just appealing to look at, it also understands that most users might not be used to the pronunciation of the coffee terms and therefore gives a phonetic representation of the menu item. The photographs illustrate how the final product will look. In addition, information design incorporates aspects such as the signages on the road leading to the outlet.





sites—information design can make a contribution in any arena in which communication takes place. Information Design goes beyond the conventional activities, such as packaging, graphics, and product design and plays an important role in defining how companies use information. How is production information documented and communicated? How are new employees trained? How can the customer experience be simplified and refined?

For example, a visualiser drawing up a campaign for Barista will play with the colours and typography relating to coffee and therefore derive the brand identity based on an orange colour. An information designer will go beyond that. He will look at other aspects of the entire coffee-drinking experience. This will include the signages for Barista, the menu items and the menu card design, the colours and lighting for the interiors, the persona entering a coffee shop and how the whole integrates with the brand identity. That's why all Baristas have a uniform colour, highlighted further through the lighting, and have a guitar, a scrabble-board and a game of Battleship inside. It creates the right ambience for the coffee drinker.

In the world of information design, all structural challenges are variants of the same problem—the problem of information retrieval. Information design is therefore the underlying organisational structure for a system of content and interactions. It does not replace graphics design and other visual disciplines, but is the structure through which these capabilities are expressed.

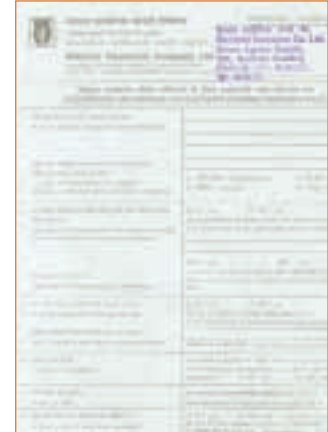
Why haven't I heard of this before?

As an activity, Information Design is as old as human communication. Human beings have always unconsciously striven to improve their communication messages to increase their rate of success. So have businesses, without calling it 'Information Design'.

As early as 1914, Willard C. Brinton wrote *Graphic Methods for Presenting Facts*, which covers much of the same subject material more recently brought to our attention in Edward



>> Visiting cards and business forms fall within the ambit of information design



Tufte's three wonderful volumes *Envisioning Information*, *Visual Display of Quantitative Information* and *Visual Explanations*.

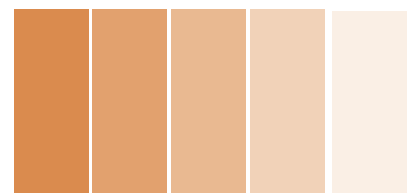
But as an organised discipline, Information Design is not more than forty years old, and its development has been catalysed by the increasing realization of the role of Information in business. Around 1985 to 1990, there were a very small community of information designers. Most of these people came from the print world. They worked on a variety of projects, including complex signage, directories, catalogues and information systems. Many of these designers bore the titles "instructional designer" or "interface designer."

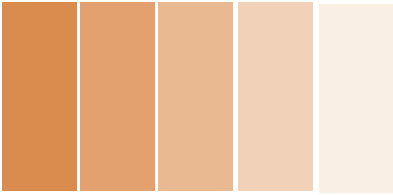
The larger design community had trouble understanding and accepting this field, as it was decidedly more obscure and conceptual than traditional graphic design. However, information design was a brave, new field—and the titles sounded perfect for the future of the Information Age.

A little bit of history

The information design community owes its founding largely to Richard Saul Wurman. He was the first to identify the issues of clarity, meaning and understandability in the print world, as well as some of the techniques designers could use to organise data and create information (as in informing). He communicated these principles both inside and outside the design community, and he firmly established information design as a measurable benefit to both communication and business. Through his company, TheUnderstandingBusiness (which was established in 1987) he and his designers defined many of the techniques and processes that would become information design.

At the same time, there were others practicing what can be considered information design. Siegel & Gale, a design firm based in New York City, was redesigning





and rewriting documents and forms—even tax forms—to make them easier to use (they called this approach “plain English”). Edward Tufte had written the successful book, “The Visual Display of Quantitative Information,” and Massimo Vignelli had declared himself an information designer as well.

At the turn of the last century, not more than 5% of the world population was directly engaged in professions where the major currency was information. But by

2000, most modern societies have more than 60% of the workforce in information centric jobs.

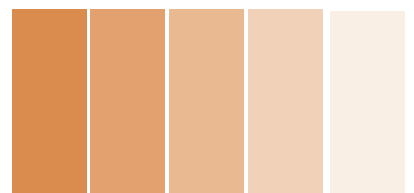
Even the sheer volume of information is staggering. A global study estimates that every year, the amount of information created is about 250 ‘books’ worth for every individual alive on the planet. This information generation is increasing by 50% per year and the business world is responsible for generating about 5 million terabytes every year. The monetary investment in custom information created by corporate USA (through brochures, custom newsletters, etc) is worth more than the entire mainstream magazine industry in the USA.

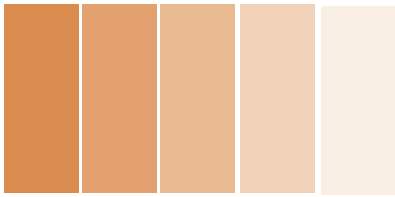
The moral of the story? Since business is already in an Information Age, it is only now realizing that it needs Information Design.



<<

Information Design can even transform dull, Word documents prepared for legal or government requirements (and running into hundreds of pages) into visually aesthetic documents that highlight the content. See the example of an information memorandum for a company wanting to set up an SEZ





The Business Advantage

Most customers today are deeply unimpressed by isolated benefits. The consumer of today makes choices based on whether a product fits into his or her lifestyle or whether it represents a desirable experience.
Bernd Schmitt and Alex Simonson, Marketing Aesthetics

The business benefit of information design can be measured in three significant ways: reduction in time or process, reduction in costs and improvement in sales.

Reduction in Costs

Doing Information Design right definitely delivers results. These are measurable results of cost savings due to efficiency and productivity. For example, work done by Information Designers for the insurance industry in Australia showed that it was possible to massively reduce error rates on insurance application forms. One case reported a reduction of 97.2%, with savings of over \$500,000 in one year on the processing of 44,000 documents (Fisher and Sless, 1990). A number of similar efforts were targeted towards simplifying the US Tax Forms to reduce errors and ease procedures.

Reduction in time/process

Improved information design can result in significant improvements in processing time and costs. In one study, the differences in time taken to process a motor vehicle insurance form were compared. The older form was shorter at about two A4 pages and the new design asked



for the same data over seven pages (Penman, 1990). Initially the processing was slower—by about 90 seconds as compared to the old form. But with each successive data set

Information Design can ensure more customers realise when the due date is and pay on time

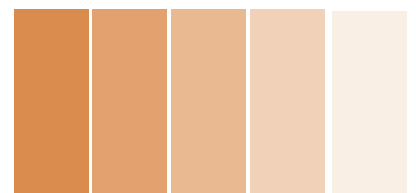
processed, the staff became progressively faster, and by round five, the new form was being processed about 30 seconds faster than the old form—despite being five pages longer. In another case involving the redesign of a telephone bill for telecommunication company Telstra, complaints due to the design of the bill went from 47% with the old bill down to 4% with the new (Sless, 1992b) and consumer satisfaction rose from 64% to 85%.

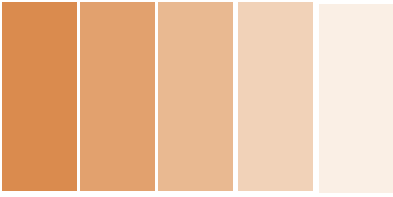
Increase in sales

Consumer packaging tests have shown that 70% of consumer decisions are made at the shelf. Therefore, an effective package design that stands out among competing products directly results in more sales. The improvement in the packaging design of Maxfli golf balls resulted to the company moving up to number three in the marketplace (from number seven) within a year. The improvement was so marked that the company had problems processing orders. (See box, Case Study: Maxfli). BusinessWorld reported another case where the falling sales of McDowell's Blue Riband gin were arrested through the redesign of the bottle.

Does it impact marketing and branding?

Modern organizations have become so intensively information-orientated that their visible 'positioning' in the consumers mind has radically changed. For example, the traditional way in which a bank would communicate its presence to customers was through its physical architecture. The imposing facade would convey a sense of security and reliability. But today, the millions of customers of a national bank, like say ICICI, would never even see their spanking new head office in Bandra-Kurla complex in Bombay. But they would relate to ICICI through their information presence: not only advertising, but also through the experience they have through ATMs, the credit card statements, bank statements, direct





mailers, bank cards, forms, publications and web site. These functional information items are the critical manifestations of ICICI—the customers’ primary link with the company.

Therefore, to create a memorable identity every aspect of your communication from brand signature to packaging, information design to brandspace must speak the same language. Apart from the product design, the perception of the company is shaped or influenced by the presentation of information, material and components, writing style, product or service use, service support, reliability, pricing, etc. How consumers respond to this input and how they respond to the experience they have with that product results in associations that are tied to the brand. This in turn shapes brand loyalty. Effective information design management provides more information about the customer, and this in turn gets translated into all the features that will enhance the emotional connection between the product or service and the consumer. These features may in the form of the product, colour, texture and interaction style. Information Design is not just about visualizing, it is

“This is the age of creativity because companies are increasingly obliged to rapidly reinvent themselves to achieve growth.”

John Kao, : The Art and Discipline of Business Creativity

also strategic marketing and producing compelling value—tangible and intangible—for the company.

What's the ultimate value that it brings?

The objective of Information Design is to help people find information, use information and apply information successfully. The information could be a legal contract, an insurance form, a pharmaceutical product instruction, the graphical user interface of software, or the story of a wine’s origin printed on its bottle.

Everyone sees this critical dimension of information in service organizations: banks, insurance companies, credit card issuers, utilities such as telecommunication and mobile phone companies; and increasingly, government departments such as taxation and education.

Case Study: Maxfli

Maxfli’s 1995 packaging persona for golf balls was more consistent with videotapes than with golf balls. Its brand mark was a nondescript upper-and-lower-case serified face that consumers found boring.

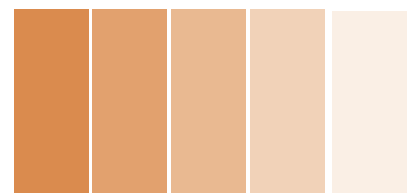
The emotional experience of golf was lacking, and so was a distinctive, compelling message to consumers. BBDO and Wallace Church determined that the offerings should be organised visually against a good-better-best strategy that would be consistent with the pricing strategies for each offering. Because the Gold HT offering was Maxfli’s only visual equity, that colour was retained for the top-of-the-line product. The rest of the series was renamed the X-Series (for exceptional feel, distance, and spin, or XF, XD, and XS) and dressed in plain black, which can be premium and masculine; white, which signaled “value” to most golfers, was used for the MD offering. Wallace Church also focused on potential “identity” colours that might capture the essence of Maxfli’s new position.

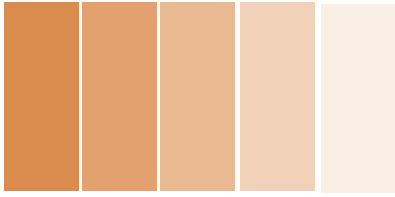
Red, for example, is the colour of energy and vitality; it represents the life force. Since red was also a mass-market colour associated with brands such as Coke, Marlboro, etc, a hint of red as a “vitality dot” within the A of Maxfli’s new proprietary, upper-case (more authoritative) brand mark was used. Due to the prevalence of photography in the premium territory of “youthful,” the final package was created using soft-focus, “monochromatic” photography of golf balls. Photography on golf-ball packaging had never been done before and so created a significant distinction for Maxfli. It also helped the package’s

appearance to evolve from “videotape” to “premium, performance golf balls” The process followed of getting the advertising agency, the PR agency, the media agency together, successfully transformed a mundane golf ball into a brand experience, proving that vision, teamwork, mutual respect, and creativity can offer a valuable, rewarding work experience and, most important, stellar marketplace results.



The earlier package design (top) and the redesigned one (left)





Processing and transforming information is the major, sometimes the only activity in such companies.

But even in 'traditional' industries like pharmaceuticals, information (in the form of instructions) is essential for the correct use of the product through the value chain—from the medical representative to the doctor to the hospital nurse to the patient. Incorrect understanding of information can often mean life and death.

Take less-threatening categories of products. Like a desktop printer, it will deliver the intended satisfaction level only if a clear set of instructions is followed. But how clearly is that information communicated? Information is therefore an intrinsic and inseparable part of the value delivered by products or services.

Defines corporate identity

Excellent information design practices influence corporate identity, affect day-to-day operations, and are consistent with the strategic goals of an organization. Information Design is used by successful companies to support a broad range of strategic initiatives. These include:

- Strengthening brand identities
- Fending off low-cost competition
- Reaping the benefits of new technologies
- Renewing connections to the customer



Good Design is good Business

Thomas Watson, Founder of IBM

■ Fostering a culture of innovation

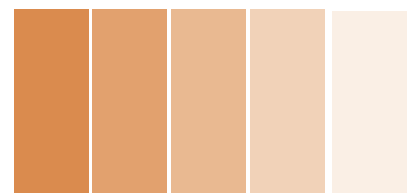
These business goals have always been an implicit part of good design management, but more companies are looking to their design programs for leadership in reaching them. Design management can enhance a company's performance in four areas:

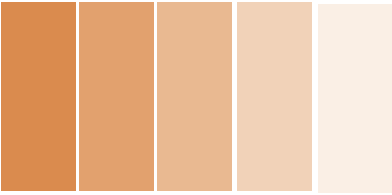
Products that provide the service; Environments from which the products or service are delivered; Graphics that explain or promote the service or product; Corporate identity that identifies the providers of products or services

In essence, information design aids to:

- Shape effective communication (internal and external)
- Create content
- Organize content
- Design tools that mediate the communication between people
- Define behaviors of ... design the interaction between systems and the users of those systems
- Design all aspects of the form in detail
- Make sure people can use it

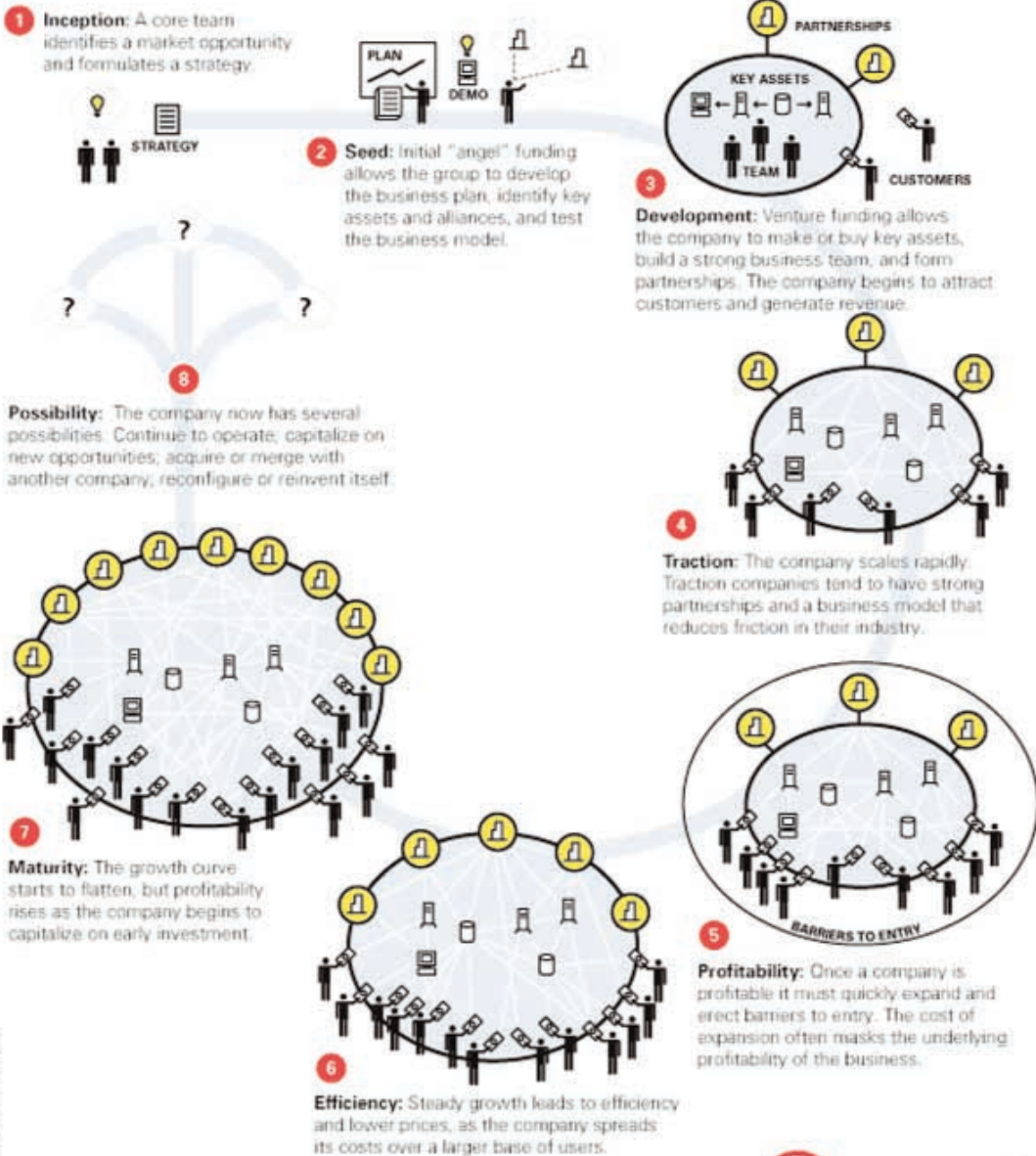
The Advantages of Information Design		
The Problem	What Information Design Does	The Value Proposition
Organisational connection and communication	Understands how the organization relates to its internal and external constituents—people (employees, customers, investors, etc.) and organisations (customers, suppliers, partners, competitors, peers, etc.)—as well as the technology and market environment	By focusing on areas with the greatest potential, companies place smarter bets, resulting in higher success rates, greater profit potential, most effective use of resources, greater cost savings, wiser technology choices.
Mismatch between company's offerings and customer's feedback, expectations, behavior	Supports an organisation's ability to deliver the brand experience	Aids in brand strategy; Inform choices about business partnerships, investment priorities, competition and growth issues. Specifically, it tells about the Products/services that should get more/less emphasis; Users/customers that should receive/not receive these products/services; Market segments that should be pursued/ignored
Understanding people, in ways useful for business and design	Understands people's character, behaviour, and context—the patterns and complexities of their daily lives	Higher probability of focusing on areas with greatest potential. Discover market white space—unseen opportunities (set your competition on their heels—be first to market, etc.). Exploring the dialogue between products, people, and contexts (physical, cultural, historical)
Deciding what to make	Conceives, envisions, and informs what products, services, and communications to make. Helps companies make the right things for each platform and device Helps companies ensure sure they make the right things for the right people	Increased acceptance and market penetration, increased effectiveness. You are more likely to make things that people want, and more likely to reach the right people with the right communication. Reduce misspent development costs by making it right the first time.
Making things well	Skilled at making products, services, and communications useful, usable, and desirable	Increased acceptance and market penetration. Increased customer satisfaction and loyalty. Increased brand reputation. Raise the number of repeat customers. Increased efficiency—greater rates of return.





the internet company lifecycle

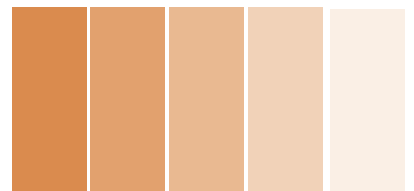
MUNDER @VANTAGE WILL SEEK TO CAPTURE EQUITY IN INTERNET AND TECHNOLOGY COMPANIES AT ALL STAGES OF THEIR GROWTH. HERE IS A LOOK AT THE GROWTH PATTERN SUCCESSFUL INTERNET COMPANIES TEND TO FOLLOW:

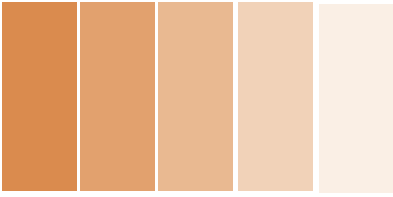


GRAPHIC BY APLANIE.COM

MUNDER @VANTAGE

^ Munder Capital Management was a mutual fund company that was launching a new high-risk, Internet fund. It knew that the key to the success of the fund were the brokers who were in direct touch with the customers. That's why it came up with a campaign to highlight the salient features of the fund. The idea was not to sugar-coat the risk part, but emphasise it along with the high returns that are possible





Areas Where Information Design Can be Effective

Depending on the medium and the industry, the information designer is involved with a number of projects. For the print medium, he might be involved in working with charts and graphs that make information more accessible and coherent.

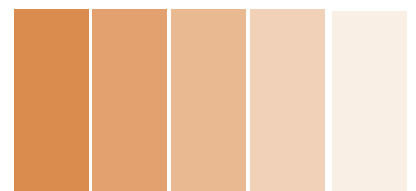
In other media, he might be working on interface design, elements of navigation. He might be an experience architect working at enhancing information retrieval or access at high-density points such as subways or shopping centers.

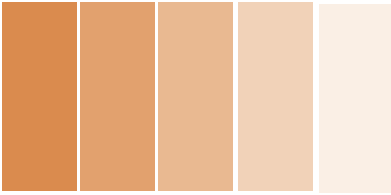
He could be working as a user design specialist, analysing forms, kiosks and other points of interaction between the consumer and the company.

Save time and improve accuracy of forms
Banks, insurance companies, government, registrars to companies, etc, have to deal with a number of printed forms every day. Designing a printed form needs to take into consideration the usage pattern, the likely time with the person, and the way the information will be used. An information designer will ensure that the most important items are in a place where they are visibly noticeable. He is also concerned with reducing the tediousness a consumer feels while filling a form. This is achieved by making the form as intuitive as possible and making process least time-consuming.

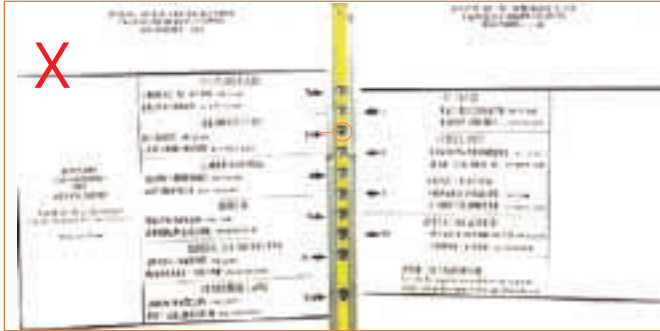
However, many times financial considerations force the designer to cramp everything on to one page. This

- ▲ The insurance form on the left doesn't indicate clearly where the text has to be filled in. There's space left below the question as well as on the side. Information has been cramped thereby leading to more confusion. The depository form on the right takes care of minor details such as the fact that most people end up writing pin code or city in the address box itself. So, both the city and pincode are indented to make it more noticeable





The Case of the US Ballot Form



▲ The recent presidential election in USA was quite controversial with many Democrats (second on the list) alleging that bad form design led to the voters checking against the second radio button instead of following the arrow and checking the third button. Many voters, it seemed, followed the principle that if it is second in the first column, it will be second in the other colour too

can lead to confusion, misinterpretation and filling in of incorrect information. During the processing stage, there would be more effort spent in correcting this information. Studies in Australia reveal that 100% of forms had one or more errors in them. As Robert Barret noted in his paper, "The Reengineering of Business Forms",

- A life insurance proposal form with 100% having one or more errors—in one study, 1560 errors in 200 forms (Fisher, Sless, 1990).

- A state government utility studied 2000 high volume forms (100 each of 10 internal and 10 external forms) and found approximately 80% in error.

- A major Australian Government application form was found to have close to 100% of forms in error. Many of these forms are returned up to 4 times to applicants to get more information. On a conservative estimate this is \$2.5 million per year just to correct errors. This does not take into account costs of records management, paper, typing letters, mail room processing, or many of the other incidentals. The figure is probably 5 to 10 million dollars per year—and this is only error correction, not routine processing. When you consider that Australia has a population of only 16 million people, this is a significant error cost.

- An application form for business incorporation resulted in letters to 90% of the applicants asking for more information.

- A state government insurance corporation allocates 20 minutes per form in its work planning just to deal with errors.

- A government grant application form has 97% of applications wrongly completed

Structuring Content

Where the fields are placed will lead to faster processing. For example, in an insurance claim, the important aspects that a processor needs to know is the insurance policy number, the claim amount and the nature of claim. However, these information items are often relegated down coming after the more traditional name, address, phone, fields. The information items in a bank payslip would be the account number and the amount to be withdrawn or deposited. However, in most bank slips you wouldn't find a proper divider for separating rupee and paise amounts.

Therefore, while preparing forms you need to focus on the processes—the way the form is used. Accuracy is far more important than speed.

Get the bills paid on time

Telephone bills, credit card bills, mobile charges—all of these can consume time if they are confusing or not designed properly. On the other hand, a well-designed bill and the information highlighted in the proper format can lead to reduction in calls to helpdesk and encourage payment before due date.

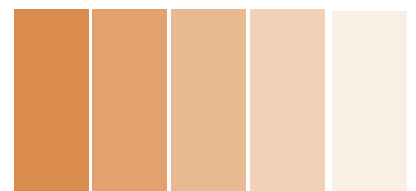
Claim Form Errors

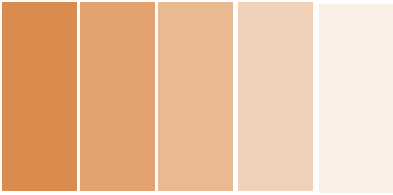
An analysis by an independent agency of the claims forms used in a district agency in US had the following statement: "The form has an information design problem. The form was designed on the principle that the type size is adjusted to fit the space available, which means that:

- there is a variety of type sizes on every page
- the type size is sometimes so small as to be almost illegible, especially for people who are visually impaired.

For example, the text in the table at Section 3 part A is particularly small. Under Pensions, benefits and allowances the form introduces a special 'narrow' font to try and save space, but this is particularly difficult for people with a visual impairment to read.

We note and commend the use of contrasting instruction text boxes that penetrate many of the answer boxes. We feel that this graphic design technique works well, but the form designer should be careful to ensure that these text boxes do not interfere with the underlying grid pattern of the form. For example, sometimes the text box is lined up with the grid and sometimes with the answer box. This basic layout format should be consistent."





Your forms is badly designed if

- Counter staff spends large amounts of time assisting customers with form filling
- Many telephone enquiries come from customers (or potential customers) about applications or similar form-filling processes
- Many requests go to form fillers (customers or in-house) asking for more information or seeking clarification
- There is extensive rekeying of computer data
- Many complaints come from customers about forms and related documents
- Large numbers of errors are corrected in the office

A study done by the Communication Research Institute in Australia for telecommunications found that:

- bills should be issued as close as possible to the end of a billing period, preferably within a week;
- there should be a choice of billing periods available to customers;
- any charges relating to a period more than ninety days prior to the current billing period should not be passed on to the customer;
- there should be a choice of options in regard to itemisation on all types of calls;
- local call itemisation should be available for dispute resolution and should also be available on request;
- itemisation of service, access and rental charges should be included on each bill as separate items, or should be notified to customers at the commencement of the service and again upon any change in supply or charge;
- bills should provide customers with sufficient itemised call details and pricing information to enable them to validate and calculate total charges, and
- bills should provide details of contact numbers for bill enquiries and any other additional information.

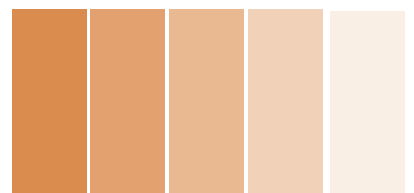
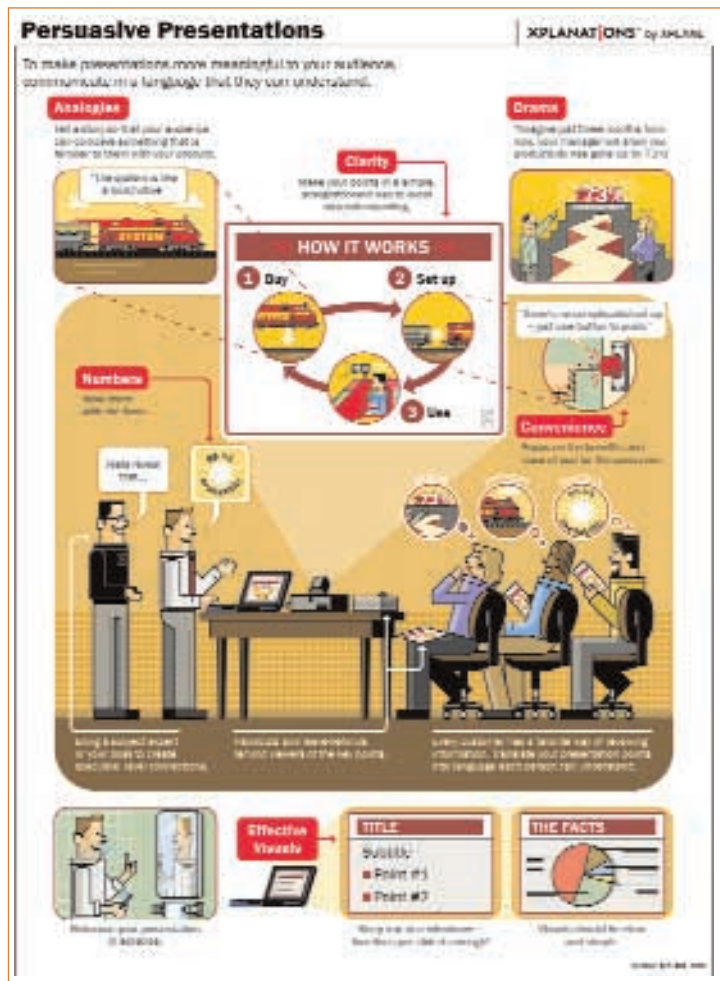
In terms of design, the following aspects need to be kept in mind:

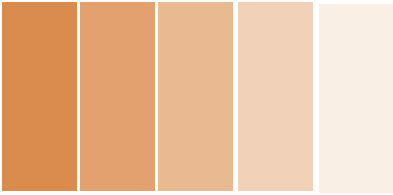
- Bills should use simple, plain English and avoid using telecommunications jargon.
- There should be clear presentation of essential

>> Visual roadmaps help people fully understand complex business issues: XPLANE

- information, namely total amount owed and
- a clear summary of call and non-call charges
- due date for payment
- advice on method of payment
- bill enquiries number
- identity of company providing the telephone service.
- There should be customer notification and an option of an interim bill in the event of unusually escalating unbilled amounts.

To summarise, the key finding of the study is the value placed by consumers on the provision of accurate, simple and comprehensible information in the bill presented to them. Regardless of telephone companies being able to offer technologically enhanced billing features in the future, it is the "basics" which remain most important to residential customers. However, the range of





features desired by consumers was extensive. Customers want confidence in the accuracy of a company's billing as well as the delivery of bills within a timely period. They want reasonable choice as to the billing period and an appropriate level of itemisation. They want service, access and rental charges detailed at least once a year. They want clear representation of discount plans and explanation of how the discount plans apply to call charges. And they want easy access to further information and advice from their telephone company.

Make a mark with your visiting card

While lot of time and effort is spent on logo design, aspects such as visiting cards, stationery, templatised presentations and emails that contribute to the brand identity are neglected. These are equally the signatures of the organisation and must be the embodiment of the corporate personality and philosophy. It must have the flexibility to be readily identifiable, whatever the format. So, even an email would be drafted with a specific font, and the signature line and confidentiality clauses carry the stamp of the corporate entity.

Newsletters sent through email, or intranets designed inhouse need to blend with the brand of the company.

Expand your customers through marketing collaterals

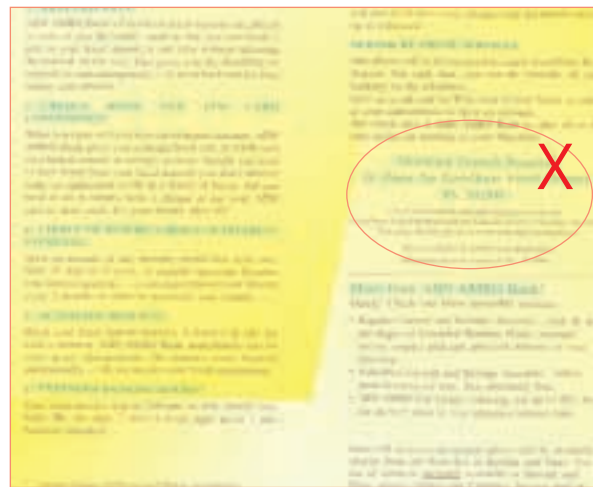
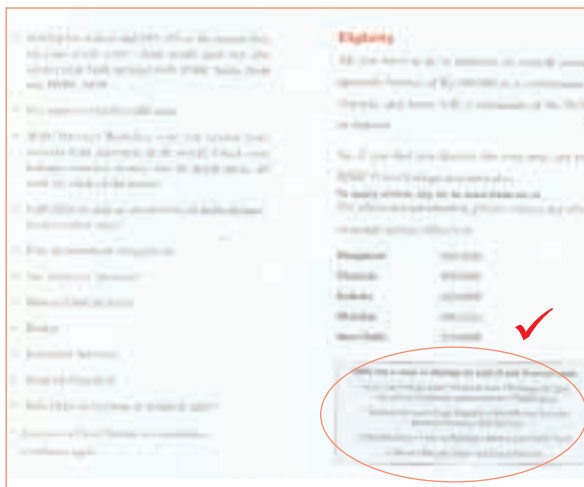
Both the compliment to a sales staff and a stand-alone selling tool, the marketing collateral system must communicate a consistent and understandable message. The



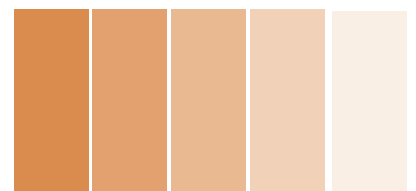
▲ Visiting cards can be far better than the staid and simple one with logo with address (bottom) as evident from the visiting card on top

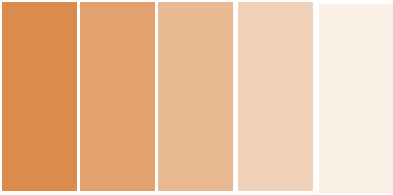
collateral should also be structured to provide the right information at the right moment a customer needs it. Successful systems are consistent in written and visual communication, while generating an appropriate level of emotional response from the audience. Collaterals can be in the form of presentations, mailers, sales kits, production information toolkits, etc.

One of the important marketing collateral is product information. Instead of plain literature that tells about the product, an explanation through infographics may better serve the purpose. XPLANE, a company specializing in such visual explanations has this to say: "Visual roadmaps help people fully understand complex business



▲ Visual differentiation through images or colour shading (above left in one banking mailer sent to customers) can often make a difference in what gets noticed and what doesn't (above right in another banking mailer sent to customers).





issues. When people understand something, they are more “comfortable to buy,” whether it’s a complex product, change initiative, new process, or even an entire company they’re buying. When people understand they make decisions, leading to increased sales, lower costs, happier customers and faster cycle times.” XPLANE helps companies communicate clearly and visually with its employees, customers, partners, investors, and the media.

Even internally, convincing either the team leaders down of a crucial decision or convincing the board of the strategic investment required, can be achieved through visual maps. Edward Tufte in his book on visual explanations speaking about the Challenger disaster states that had the engineers, who were deeply troubled about the impending launch of the shuttle, been better skilled in the visual representation of data, or had they had access to a designer who did, they would probably have been able to demonstrate more convincingly to themselves, as well as to those who had the final call on the launch, the catastrophic consequences of proceeding as planned.

Convey the right meaning in reports and documents

A company’s annual report, prospectus, fact sheets, and internal communication are all opportunities to convey



Here an attempt has been made to explain a credit card using locational aspects. But the problem is that the space hasn’t been utilised properly. The text gets crowded in the left and is the first point of attention, while the design actually wants us to focus on the credit card first. The criss-cross pointers confuse and we are left trying to decipher a maze and find which arrow points to which text or vice versa.

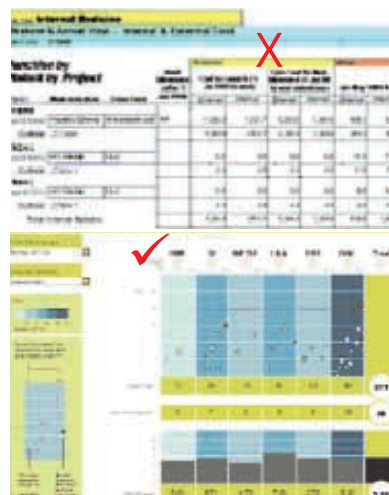
information in a clear and relevant manner, and to reinforce the value of the brand. All of these have to present a consistent style with respect to the design. The information designer is able to analyse the right style keeping in mind the requirements of the user and integrating it with the corporate identity.

Case Study: Visual I/O

Visual I/O undertook a data mapping project for a pharmaceutical company. Sometime before this project was undertaken, it was rumored that tens of millions of dollars were misplaced in this pharmaceutical company’s budgeting cycle. The money was not taken, it was apparently lost by the financial tracking system.

The organisation had also had a number of drugs fail in late stage clinical trials (a huge financial loss as well as an embarrassment) and was being pressed by the parent company towards more operational accountability, faster and better decision making—identifying bad projects and cutting them earlier.

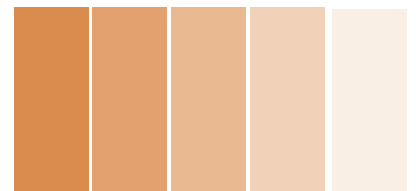
Understandably, this organisation was ripe for some new perspective on finance and portfolio management. A management consulting firm offered them a model which approached budgeting in a

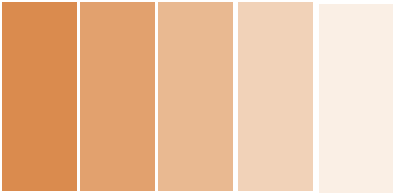


Using scatter plots and intuitive colour coding information can be represented more visually.

completely different way: where this client had always organised their budgets by functional area, (e.g., chemistry, toxicology, clinical trials) they now wanted to see financial data across each franchise or therapeutic area (e.g., cholesterol, heart, or asthma medications) and across each project in development. This is akin to knowing how much of your grocery money you spend in the dairy section, in the produce aisle, in canned goods and at the meat counter, and then being asked how much a particular meal cost. The president of the company, a critical sponsor of this effort, felt he had no comprehensive picture. He had no way to see the whole operation—the risk and opportunity areas—and current systems offered no way to evaluate the business key strategic assets—its portfolio of R&D projects.

Visual I/O’s task was to work with the consultancy firm and develop the data structure. The difference is shown here.





Present accurate data

Data is fairly worthless to most of us; it is the product of research or creation (such as writing), but it is not an adequate product for communicating. To have informational value, it must be organised, transformed, and presented in a way that gives it meaning.

Information design makes data meaningful for audiences because it requires the creation of relationships and patterns between data. Transforming data into information is accomplished by organising it into a meaningful form, presenting it in meaningful and appropriate ways, and communicating the context around it.

Reduce support calls through better Product manuals/on-product explanations

Most consumer goods items, whether an electronic product, a household utility or a computer, face some problem or the other which would have been solved by easily looking up the manual. But that doesn't happen, and customer service centers are taxed with more mundane queries.

If the manual explained everything, how come people don't use it? The structure of product manuals is geared towards information about the product and its various features; not towards problem solving. The product manuals are therefore perceived as being too technical in nature and not user-friendly.

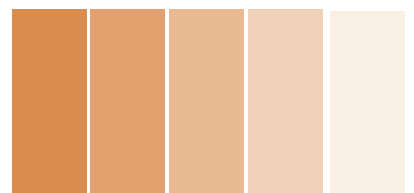
Product manuals have to take the approach of solving common queries through visual aids (how to install a utility, likely problems and how to solve them). Dividing a product into different locational maps and then explaining how each location works, the likely problems that will be encountered, its relation to other locations, and so on, is a better structure than traditional linear methods.

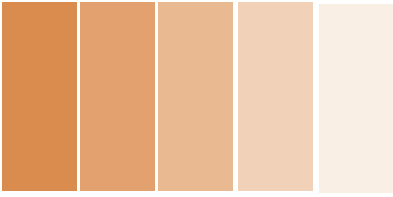
Get noticed through signages

Signages refer to hoardings, placards, boards, etc, that are used to advertise a brand. Signage, banners, displays, and vehicle signage can be impactful communication tools. While vehicle graphics are often called moving billboards, if they're not designed right, they're just visual pollution in the environment. Signage, if taken



While the explanation on the printer is visually arranged about how to change the ink cartridge, without labelling it is difficult to understand





seriously, can be a great mechanism for communicating an organisation's brand identity.

Wayfinding signage must be noticeable, clear and logically placed. In addition, they should reinforce and strengthen brand image, complement architectural integrity and improve the visitor experience.

At a retail outlet, different signages compete with each other to grab attention. Signages, therefore, need to have a sense of place. A memorable or stimulating environment remains in the mind as long as any other expression of brand values.

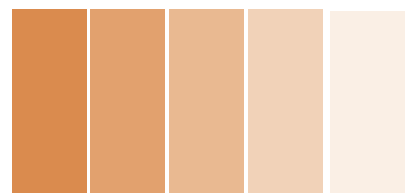
Even exhibition design, while temporary, should leave a lasting favourable impression. Sound, light, visual imagery and text all combine to engage the audience, presenting a clear brand message.

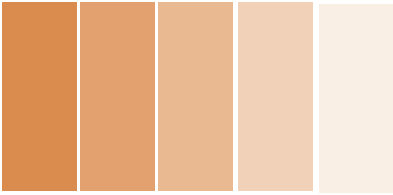
A science that deals with these signages is Environmental Graphic Design (which means graphics in the environment). Within this specialty, while there is still much that is predominantly the application of graphic style to information, like much of retail graphic design, or design of the incredible and elaborate graphic structures found in entertainment venues nowadays, there are probably even more projects that extend the design process to a whole different level. These are typified by sign systems for interstate highways or for complex public environments like railroad stations or airports, which are more to do with the study of how people understand and use information in these environments, the determination of what kinds of information they need to comprehend and navigate them, the understanding of the different needs of the whole spectrum of those individuals who are going to be using the information (old, young, abled, disabled, differently abled and so on) and the design not just of a lot of cute signs, but of a whole system of information and the formulation of strategies for conveying it.

How a Package Design can sell products within 2 seconds

A product packaging is the ultimate on-shelf advertisement. Package design is a critical tool to assist in communicating product attributes and benefits. An effective package, should be unique, impactful and relevant to the category. For consumer goods to be fast moving, the challenge is to create packaging which is bold enough to stand out in a crowd, clear enough to create the brand promise and appealing enough to secure a purchase... all

∨ The logo and the address gets lost in the signage, and the visibility would be even lesser during the night time





Case Study: Eskimo Pie

It was clear that over the years Eskimo Pie brand had endured more than its share of packaging neglect. The original chocolate-covered ice cream novelty lacked quality, dressed in its dull, dated packaging. The same could be said for the Eskimo boy, a package element we believed had great potential as a brand icon. X

Believing in the power of emotionally compelling brand identity, FutureBrand



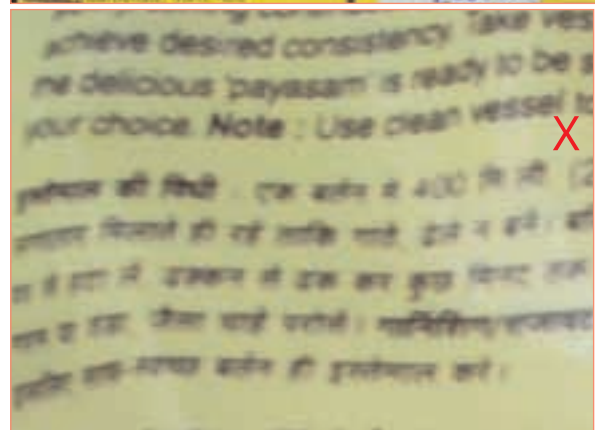
Package design before (top inset) and after (left). A good package design can increase sales at the point of purchase ^

Coleman transformed the ordinary type into an ownable, arching curve, locking it up with an expressive Eskimo boy who personified the brand. The once printed gold background was transformed into the "aurora borealis." The brand's new look now communicates the exuberance and fun that should be present in the category.

in less than 2 seconds. For a gourmet product, the emotional appeal of the pack is as vital as the product itself. Whether contemporary or traditional, handcrafted or cool or sophisticated, the pack must be desirable, must evoke a sense of anticipation. Children, on the other hand, respond to brands which are clear bright, colourful, full of personality and fun. Parents are more concerned with health and wellbeing. Finding the right visual language is therefore vital to brand success. A BusinessWorld article (January 22, 2001) reports that packaging can make a difference to sales and can offer ease of use.

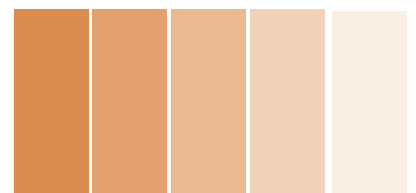


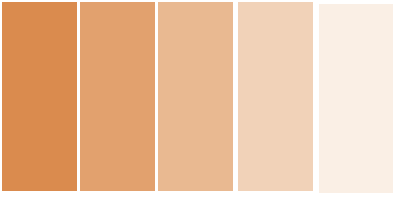
<< The design for Blue Riband, conceptualised by Icarus, makes the bottle look strong, like Popeye through the muscled outline. The redesigned pack actually managed to arrest McDowell's falling sales. (Source: BusinessWorld).



On-product explanations may be the differentiator towards a product being purchased. A visual iconography as in the top image with certain items highlighted (notice the 'takes 25 minutes' highlight) works much better within the same space than an instruction with just text (above) ^

"The new parachute dispensers allows the oil to be scooped out even in winter when it solidifies. Or the cartons with plastic lids in which Tropicana sells its juices." In the same article, Ashok Murthy, managing director of Bangalore-based Moola Electronics, explains why he considers design as a central feature. "If the technology is stable, it is essential to make a product stand out through design." Other examples abound of NIIT using an information designer to develop different identities for its course, especially for SWIFT, that was targeted at professionals.





^ In the ATM interface of HDFC, the options are never linked to the same level, leading to problems as in the Florida ballot. Inconsistency in design leads to confusion. Other problems with the interface include no clear labelling for a cancel operation in case you do not want to enter into any transaction and the way the amount goes from left to right (the mathematical way) against the right to left that we are used to writing/typing

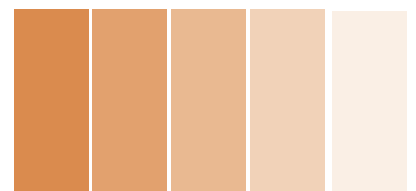
Increase the customer turnover at your ATMs/Information Kiosks

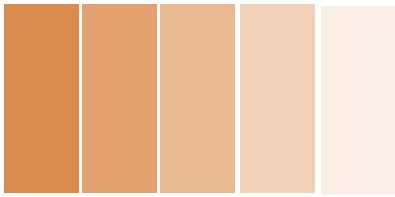
Interface design is a major area of work for kiosks and ATMs. Hindustan Level, for example, even hired C2R, a design firm for making an ice-cream kiosk. The fundamental concept is to provide all the relevant information that can be accessed in the least possible time. This is achieved through the navigational structure for the kiosks, the labeling of information, the information maps created through the interface, etc. Many a kiosk suffers due to the navigation aspect or because they have not been designed keeping in mind the physical environment in which they have to be placed. Lighting affects readability, and therefore the typefaces have to stand out even with a dim light.

One of the designed that created quite a controversy of kinds was the graphic layout for the presidential elections in USA in the state of Florida. In this instance, the information presented was not inaccurate, but because

of the graphic layout it was misinterpreted by many voters, causing them to cast their ballot for a candidate other than intended. This was a failure of design, and not of voter intelligence as claimed by the potential losers in the contest.

This example illustrates that the way people perceive and process information is a critical area of study, deserving of much more attention than it regularly gets. It is also an example of the importance of not simply providing information, but of understanding how it is understood. It is not too difficult to see how the mistakes arose, and to believe, that had skilled information design professionals been involved, these problems could have been foreseen and forestalled.





Tools of the Information Architect

Visual Maps

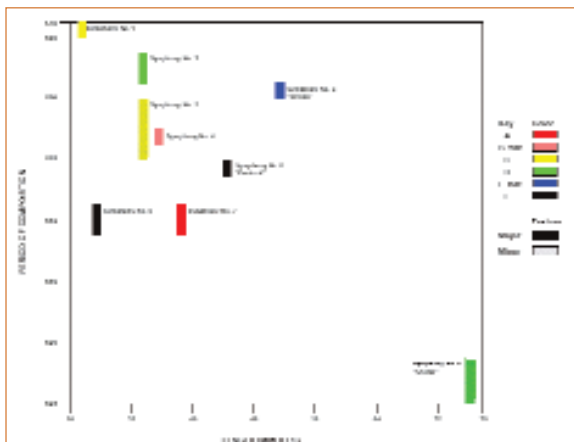
Information designs that use the position of graphical primitives have long been used to concisely convey data. An advantage of these designs is that the user can query by attention—answer questions by controlling visual attention (and receiving immediate feedback). The user can more rapidly explore the information space because he needs to alter only his visual attention (and not the interface) to adjust the parameters of the query.

Research has shown that many visual properties can support efficient visual search. Different characteristics highlight how the visual map is perceived. Some of these include:

- Position
- Colour
- Shape
- Motion
- Depth

Infographics

A picture is worth a thousand words, and that's why some of the best explanations are graphic representa-



Information Design for Business

Prepared by SYNAPSE



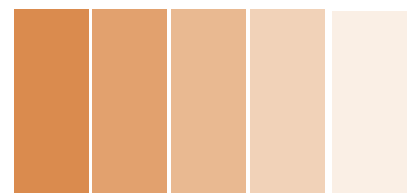
The two maps are exactly the same, but the difference is that the map on the right has an visual indicator as to where you are

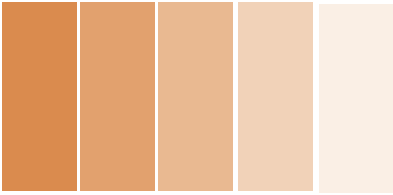
tions rather than text. For a good infographics, the knowledge of the process or the system is essential. The infographics has to not only present the flow of information at each stage, but depict the nature of transaction and the number of people involved. XPLANE, for instance, uses a common theme or metaphor to unify the communication requirements. This creates a “comfort zone” around new product rollouts or change initiatives, making them easier for people to understand and accept.

Typography

Our visual environment is becoming increasingly complex. Computer printouts, OCR barcodes and digital neon signs are now familiar landmarks in our visual environment. Typography helps through differentiation, highlighting and in many cases improves readability. For instance, a sans-serif font on a visiting card or a Web site reads better than a serif font. On the other hand, sans-serif fonts are considered less legible than serifed fonts for the extended reading in magazines and newspapers. However, they are perfect for use in signage. Typography works through the use of fonts, text colours, font sizes and imaginative layout.

<< An information map of Beethoven's nine symphonies. Colour and texture are used to indicate the key of the composition

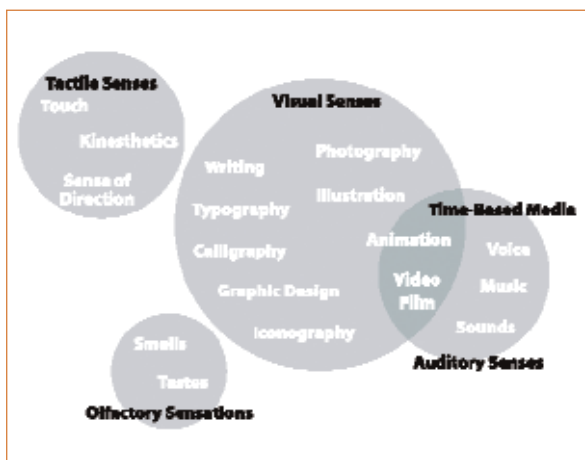




Modern day typography is not just about legibility. It is also about using layers and fragmented text

While younger readers cope well with, and even seem to enjoy the interaction with new fragmented typography, older generations of readers, conditioned to the static simplicity of traditional printed pages of continuous text, are disinclined to make the necessary effort to reconstruct a text. In informal exploratory research, older readers dismisses the multiple, fragmented, disrupted texts of the new typography as 'illegible' and 'meaningless'.

From research that has been published on the processing of visual information (Marr, 1982) it would seem that 'quick grab' legibility demands a different mental activity to reading continuous text. This kind of activity—of synthesising a sequence of partial texts into a coherent whole—is in fact a fundamental cognitive skill—the on-going process through which we construct



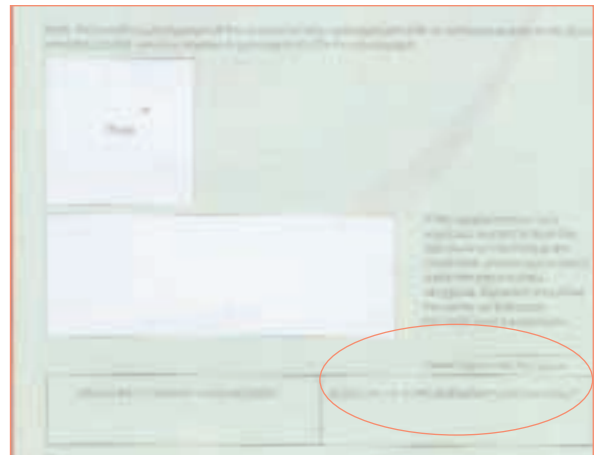
What's the effect of a visual or text on the senses. Learn about it with cognitive psychology

a coherent sense of our immediate environment through a combination of successive glances.

Appropriate typography

Optimum legibility is therefore conditional on the context of use and the reading habits of those who will use the information. What readers find acceptable in one genre of document, such as a newspaper, or insurance policy is not appropriate in either a novel or a youth culture magazine. If we want to make effective documents, we must use typography appropriately to meet the needs of our target audience and the context in which our documents will be used.

Knowing who you are designing for, knowing what

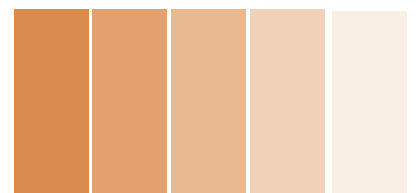


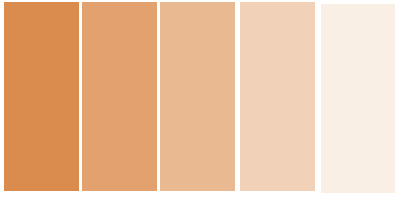
Where do I sign and how many times? The visual arrangement for the signature boxes are such that a person filling a form might end up thinking he has to sign only once on the line. Cognitive psychology helps in understanding the eye movement of a user

their information needs are, determining how they need to access the information, how they need to act upon that information, and what they will find visually inviting, are the critical factors in providing an appropriate visual solution.

Cognitive Psychology

How does a user perceive the visual? What are his eye movements? Which point on a map is noticed first? These and other similar questions are answered by the field of cognitive psychology. This science highlights how our senses respond to different imagery. This science is a fundamental tool for all information designers as it helps in relating to the user experience.





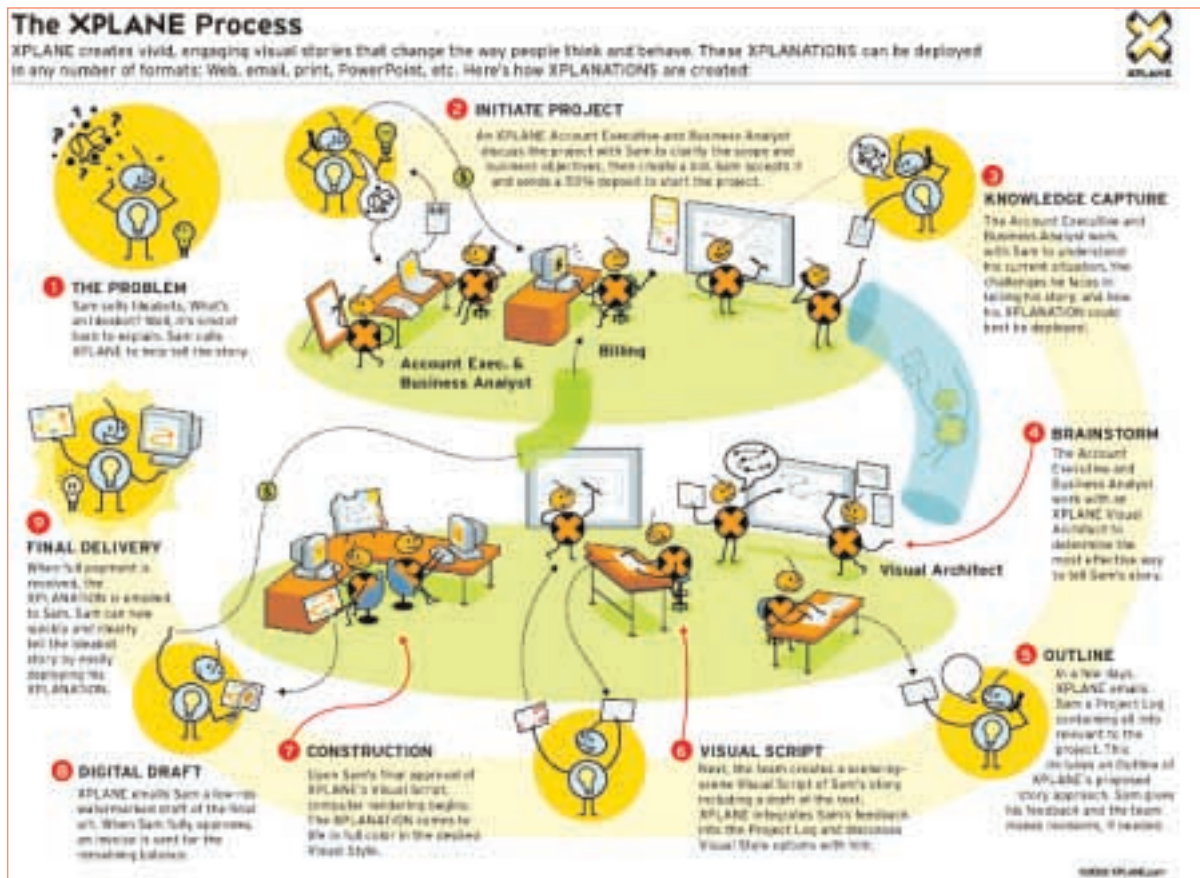
The Information Design Process

What do I need to do first?

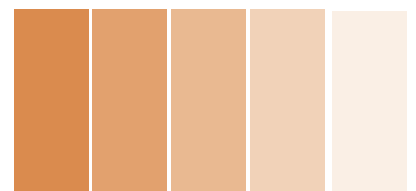
The first step in transforming data into information is to explore its organisation. This simple yet crucial process can appear futile, but often you can discover something through it that you had never seen before. It is important to realize that the very organisation of things affects the way we interpret and understand their separate pieces. Take any set of things: students in a classroom, financials for a company, information about a city, or animals in a zoo. How would you organize these? Which is best? Richard Saul Wurman suggested five ways to organise everything, while some other

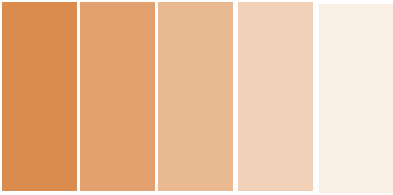
information designers have suggested seven. Literally everything can be organised by alphabet, location, time, continuum, number, or category. Additionally, things often can be randomly organized (in other words, by not organizing them).

Often, there are often better ways to organise data than the traditional ones that first occur to us. Each organization of the same set of data expresses different attributes and messages. It is important to experiment, reflect, and choose which organization best communicates our messages. It is important to note that these seven ways of organising make it easy to brainstorm,



^ How the Information Design Process Works: An example of the system at XPLANE





but it is up to us to choose the most appropriate way to present data to our audiences. Some of the more important ways of organizing are presented below.

Alphabetical Order

Most books have alphabetical indexes because, while we may know exactly what we are looking for, we often do not know where to find it. Though the alphabet is an arbitrary sequence of symbols, indexes work well because we have been taught alphabetical sequence from an early age. It is not universally useful, as you will find if you ever try to use a phone directory in a language that uses a different alphabet than your own. Many indexes are organised alphabetically, but few products are (primarily dictionaries, encyclopedias, and other reference works). This is because few data have any great meaning based on the first letter of their labels. The alphabet actually is a continuum (from A to Z) but it is a special one for the reasons stated above.

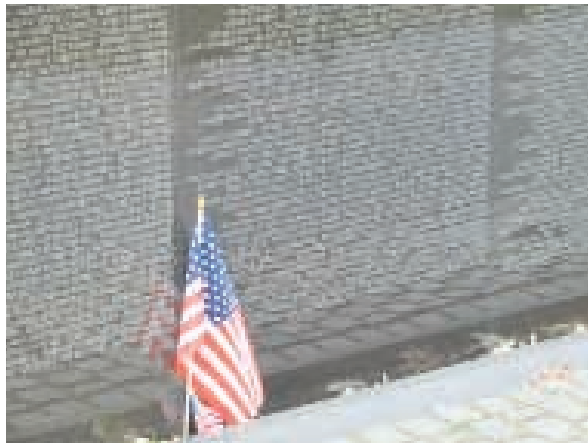


Often, by default all addresses are categorised alphabetically without considering the actual use. The real use, say with ATM facilities in a mailer, might be to locate ATM closer to the place of residence than an alphabetical listing where you haven't heard of the address at all

Case Study: Vietnam War Memorial

Here's an example where the organisation of data can provide an intense emotional reaction. If you are familiar with the Vietnam War Memorial in Washington, DC, you may already know how quiet yet moving this monument is. What you may not realise is the importance of the monument's organization. The names of all of the US military personnel who died in the Vietnam war are

inscribed on the surfaces of two long, black granite walls. The walls start out short (around twelve inches) and grow to more than nine feet in the center where the two meet. They are constructed this way for a special reason. All of the names are arranged by time (date of death), from the first who died during the "police action," to the mounting death toll at the height of the war, trickling off as the US pulled out of the area. The names thus chart the pattern of US involvement in Vietnam and the personal stories of the real



people involved and most affected. Imagine how different the monument would be without this organization. Suppose the names were organised by alphabet (which was actually proposed once the design was accepted). While it might be easier to find a particular person, the search and the names themselves would be reduced to a mechanical list, a granite White Pages. Lost would

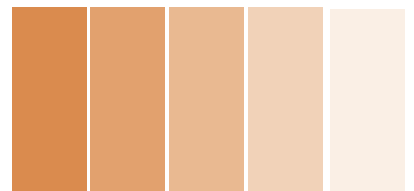
be the individuality of each name and life. In a list of seventeen John Smiths, which one is yours?

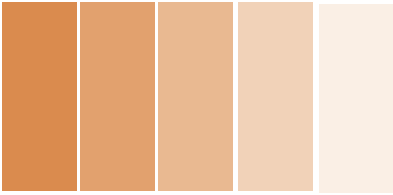
An alphabetical organization would have completely depersonalised the monument and devastated its emotional power, so would most other organisations. Imagine if the names were organized by category (e.g., pilots listed here, infantry listed

there) or on a continuum based on rank or, for that matter, height (e.g., the tallest men at one end, the shortest at another). What is key to this emotional experience is that those who died are found among those whom they died with. Without this organisation, in fact, there is no longer meaning to the wall growing and tapering down in height.

Any other organisation would have created a different memorial entirely and, most likely, one without the power and emotion created in the existing one.

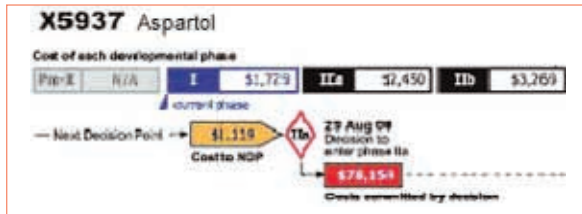
All of this is some-what subliminal. When you visit the monument, its information structure isn't the first thing you perceive, but it works nonetheless. This is true of any project, whether it is a sensitive and emotional monument, a powerful and inspiring museum, a useful and concise catalog, or a thrilling and interesting performance.





Locations

Locations are natural ways of organising data with important relationships with or connections to other data. How easy would it be to find the exits to an airplane if they were listed and described in text with no diagram? Many projects can benefit by locational organizations but seldom are, simply because their designers never experimented with the idea. Producing maps and diagrams is not as easy as writing text, but if you have ever used an atlas or Access travel guide, you know how much better a sense of a place can be achieved when things are oriented by geographical relationships. Consider a subway map that simply lists all station stops in sequence versus one that arranges them in a representation of the city they serve.



A time-wise division of costs gives a better visual presentation than a traditional table

Time

Organizing things by time or sequence may sound obvious for bus and train schedules or historic timelines but it can be just as effective for instructions such as cooking, driving, or building. Time need not be addressed only in minutes and hours but also in days, months, years, centuries, processes, or milestones.

Continuums

Any qualitative comparison can be described with a continuum. All ratings systems, whether numbers of stars, indicate a value scale. Arranging items in a continuum indicates that this value scale is the most important aspect of the data. As with any organisation of data, the primary organization expresses a different message and importance than other organisations.

Numbers

Much like alphabets, numbers are merely an arbitrary continuum (usually Base-10, since our species has ten fingers). But unlike alphabets, Base-10 numbers are much more universal because they combine in different forms due to mathematical relationships.

It is common but not necessary for number organizations to be continuums. For example, the Dewey Decimal System, used for organising books in many libraries, is not a continuum because it is a number system that does not represent any magnitude or attribute; it simply assigns numbers to categories and sub-categories.

Categories

Categories are a common organisation and a reliable one, since they allow similar things to be grouped together by attributes that are considered important in some way. Defining the specific categories is crucial, as they will communicate the designer's prejudices and understandings more easily than any other organization.

As with all organizations, these control the perceptions of the information.

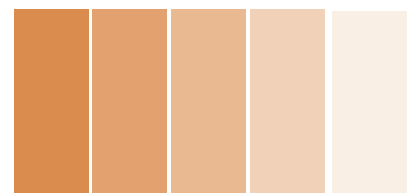
Randomness

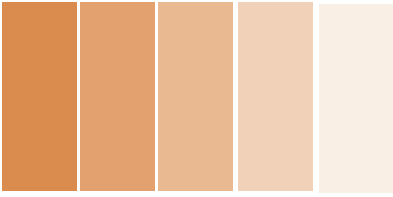
While random or arbitrary organizations might not seem a useful way to organize things and "add value" to them, it is sometimes the best way if a challenge of some kind is involved. Consider a game where all of the pieces are arranged already or one where its sequence is already determined and carefully, logically laid out. Such a game would not be very fun to play. There may be other times where random organizations present a better experience than an orderly one and it is up to the designer to explore these possibilities and employ good judgment.

Can you ask for a prototype or model?

During the Model phase, usage and workflow patterns discovered through analysis of the field research are synthesised into domain and user models. Domain models can include information and workflow diagrams. User models, or personas, are fictional, detailed, archetypal characters that represent distinct groupings of behaviours, goals, and motivations observed and identified during the Research phase.

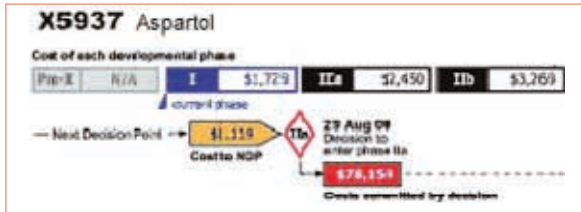
Personas serve as the main characters in a narrative, scenario-based approach to design that iteratively generates design concepts (in the Envision phase), provides feedback that enforces design coherence and appropriateness (in the Refine phase), and provides a powerful communication tool that helps developers understand design rationale and prioritise features based on user needs.





Does the final result work?

Using each of the primary personas in a daily life scenario, a framework is created wherein the interaction with different media is highlighted and the likely

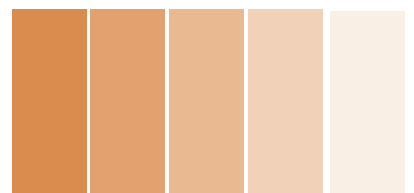


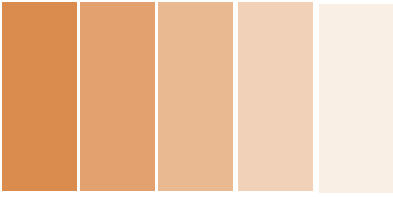
A time-wise division of costs gives a better visual presentation than a traditional table

responses predicted. The scenarios enables the information designers to determine which behaviours and interface elements could apply across interfaces or medium, and which are unique to individual interfaces. Whiteboards are used extensively to think freely and make changes easily.

Based on the results of the framework, appropriate changes are made and responses in simple scenarios are depicted.

The feedback from the client is integrated during the Refine phase of the design, where the actual interfaces are detailed.





Implementing Information Design: The Practical Aspects

Why fix it, if it ain't broken?

A successful business manager anticipates problems and solves them before they occur. A business therefore cannot just concentrate on the present—it has to understand the pulse of the market and evolve itself to changing scenarios. What works today, therefore, might hold true for tomorrow. Even within the current framework, an information designer can bring the business advantage of reduction in costs, time and improve sales as highlighted earlier.

At the same time, an information designer understands the user perspective and will be able to predict future scenarios and areas of opportunities.

Isn't my advertising agency capable of this?

Traditional advertising agencies and marketing consultants are not equipped for Information Design challenges, simply because it is a highly interdisciplinary science that has more to do with 'education' than with 'communication' in general.

Renowned advertising agencies are experts at traditional communication exercises- planning media spend, negotiating on prices, understanding social trends and sub-cults, securing celebrity endorsements, creating compelling messages with one central idea...but they are not trained, equipped or even aware of the larger challenge in conveying complex information to ensure that it is understood, used and applied appropriately.

Specialist organizations are involved in such tasks. This is probably why there is not a single advertising agency in the world with even a minor presence in the \$12 billion e-learning market. Such markets are dominated by companies that specialize in structuring, designing and communicating 'educative' information in a digital form across media.

Do I have to train my staff in information design?

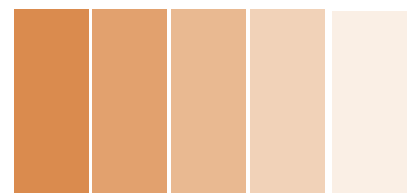
Raising information design awareness throughout the

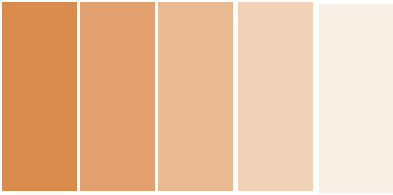
business is going to one of the biggest challenges! But the only way a company can be certain of maximizing the wealth-creating potential of design is to ensure that it becomes part of the psyche of the whole business. It must become unexceptional in its use—simply, “the way we do things.” The role and value of design must be clearly understood by everyone who is in a position to make or mar the end result. Employees who are far from the top of the corporate organisation will be in a position to undo plenty of good design work with a careless word or action. Everyone who works with customers will need to be made aware of their importance in maintaining design integrity and through that, contribute to maintaining and building a company's reputation.

However, information design effectiveness comes from beliefs and attitudes, not laws and corporate policies. That doesn't mean everyone has to be sent on a crash course in information design and design management. The objective is to bring design to the business rather than bring the business to design. Showing staff how the how the strategic proposition of a company can be manifest in different ways—through the design of its products and services, through the way it talks about itself, and through the way staff behave toward each

Design and Corporate Culture

Tom Peters, Tom Peters Company, USA writes: “I always remember one company that decided to use my Thriving on Chaos book as a symbol of their quality program. As a gesture of appreciation, they sent me a little cut-glass block that they had given each of their employees as a memento of the program. It was nice enough, except that the phrase “Thriving on Chaos” was set crooked. Now when employees look at it, they must think, “Here we are—the XYZ Company—with thousands of employees on our payroll. We are obsessed with quality and we want you to remember that every day with this little block where we couldn't quite get the letters straight.” Yes, it's trivial, but it's indicative of our lack of obsession. We seem always willing to compromise on quality. And that is a significant problem because without a strong quality ethos, it's impossible to have the kind of design ethos that contributes to corporate success.”





Case Study: Heathrow Express

The value of involving everyone was clearly demonstrated in the Heathrow Express project. Heathrow Express is a high-speed rail service linking, in just 15 minutes, Heathrow airport with Paddington Station in the heart of London. The product's strategic positioning was that the service would be a fast and high-quality experience. This business proposition gave a very clear steer for the subsequent design response. Its position as a premium service is reflected in the design of the trains and the stations, as well as in the marketing communications. However, for a service organisation, the most powerful way in which the business proposition or brand can be built (and just as effectively destroyed) is through the interaction that customers have with staff. The problem was, the service ethic is not strong in the UK and is probably at its worst in the area of public transport. In order to make sure that the



Heathrow Express service was delivered in the right way, a highly intensive recruitment screening process was set up to make sure that only those with a natural disposition toward customer care were recruited. These people were given uniforms that were far removed from the peaked caps, epaulettes, and gold braid usually associated with railways; they were then put through brand awareness training, including how to interact with customers. By doing this, Heathrow Express developed a small army of champions who were committed to protecting and living the brand. Was it worth the effort? From a business perspective, Heathrow Express is a major step on the way to providing an infrastructure worthy of one of the world's leading international airports. From the customer's perspective, the service exceeds expectations. Its quality has been compared with that of premium air travel.

other, suppliers, and customers is one step. Most of these manifestations are influenced by design, and they must all be coordinated so that each one contributes to building the strategic proposition. Business clearly leads this whole process, but without a focused and coordinated information design response, that leadership is impotent in delivery.

In the final analysis, design is about obsession. It is pervasive. And it is a vital element in today's competitive marketplace.

More importantly... do information designers understand my business needs?

True, design does little to foster a positive understanding of its role in business. It still presents itself as an elitist, arts-based activity that deals with the "higher" things in life and is not to be sullied by commercial constraints and considerations. Not surprisingly, therefore, most businesspeople perceive design as superficial, irrelevant, and expensive. As is often the case, the perception is at odds with the reality. Design is none of the above.

Handled properly, design can certainly increase the likelihood of business success and, handled badly, it can

lead business into a blind alley from which escape might be hard, if not impossible. Because design touches so many parts of a business, it is probably the only glue universal enough to join corporate intent with day-by-day delivery. It can bridge the gap between a company's ambitions and the things that go on every day in the factory, the showroom, or the office in a way a mission statement never can.

Sounds interesting. But

...is it expensive? Design is not an avoidable cost, but rather a value-adding activity that can, if properly managed, create an all-important point of differentiation in a world in which most things are becoming commodities. It can influence the way customers view a company's products and services and the way staff view their employer. Design can make clear what a company stands for and what makes it different from the rest. Although price can certainly be a differentiating factor, as Rodney Fitch once said, "Only one company can be the cheapest—the others have to use design."

