

# **Creating a Web Site for Studying Strategic Management**

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ISBN 1-901513-15-7

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Published by: LTSN BEST, School of Management, University of East Anglia, University Plain,  
Norwich, Norfolk, NR4 7TJ

Printed by: The Open University, Walton Hall, Milton Keynes, MK7 6AA, UK

# Creating a Web Site for Studying Strategic Management

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*This is the story of how we created, through a do-it-yourself approach, a web site for students studying strategic management, research methods and management ethics at our universities. We had clear objectives and a rationale for what we were attempting to do. We were fortunate in possessing some of the IT skills required but had to learn the rest.*

*We based the design of our site on the A.T. Kearney 3-C model, which we adapted to meet the students' needs. Here we describe the site and its design and explain how it expanded through links to other sites. We also provide details of our students' evaluation of it.*

*We discuss the use of Internet technology as a means of reducing costs and facilitating radical transformation of business and university systems. We argue against centralised web portals for delivering an e-learning strategy and in favour of a distributed one, controlled by individuals and/or small academic groups. We discuss the creation and use of business webs and the extended enterprise model to the university. Finally, we argue for wider use of personal, controlled learning webs, which are free to access and use, to increase students' understanding of the subject area.*

## Objectives

Together, we started in 1999 to develop a web site (<http://www.strategios.co.uk>) devoted to the study of strategic management, research methods and management ethics. We have operated and maintained it ever since: jointly, we pay for, run and control it, although one of us (Ismo Kuhanen) is now a consultant and no longer teaching in a university.

We deliberately chose to be independent from the bureaucracies of our universities. This enabled us to develop the site in any way we saw fit.

In 1999, we wanted to create a site and deploy e-learning methodologies in advance of what our universities could offer at that time. We wanted flexibility to change material, add new links and respond to our students' needs quickly. Our universities could not deliver the flexibility we required, so we embarked on a DIY approach.

We knew that our objectives were to:

1. create a web site for our subject with a consistent theme through the many pages;
2. have a showcase for our teaching material;

3. build an interface with the wider scholarly community;
4. provide access to and use of the site free of charge;
5. control our teaching content, bearing in mind the course requirements of our universities;
6. enable our students to broaden their horizons through interactive links germane to the subject of strategic management;
7. share our enthusiasm for our subject with others.

### Rationale

Teaching and learning are changing. Content is changing and so are teaching styles but the most rapid changes have been in the technology available for learning: for example, see De Montfort University's excellent web site at <http://www.dmu.ac.uk/~jamesa/learning/contents.htm>.

The 1990s heralded the dot.com era: there was an exciting technological crossover between developments in e-commerce and what could be achieved in teaching and learning in universities. The commercial e-hubs (Kaplan & Sawhney 2000) which were being created for procurement and

universities. The rationale for web-based systems had arrived and they were seen to work for e-commerce. Adapting e-hub and portal models to a university environment would look something like Figure 1 below, a diagrammatic overview of an e-learning portal.

In Figure 1, the e-learning portal is controlled from a web site and is designed around a set of appropriate learning models. The web site and its pages are linked to a block of appropriate resources in the form of content available to the students through two main filters: the learning model being used and customisation techniques designed to meet broad user characteristics and learning needs. Customisation borrows from the fields of customer relationship management and mass customisation models used by financial services and e-retailing companies. The e-learning portal is controlled and operated by the provider and users must interact with the provider's agenda. Password protection locks out users who are not part of the system and all interaction

with external links is strictly controlled. The intention is to create a something

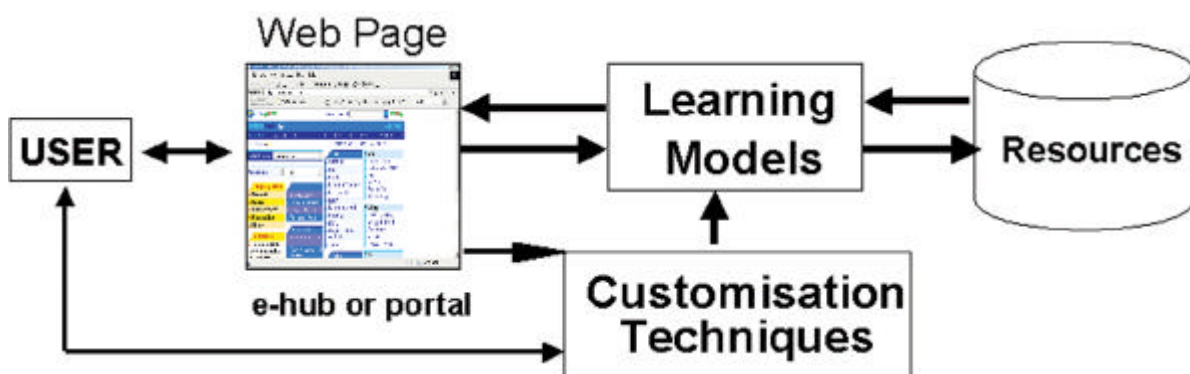


Figure 1: E-hub or Learning Portal

value chain management (Rayport & Sviokla 1996) might, with modifications, be applied to

of a 'walled garden' within which learning will occur.

Implementation of e-commerce has proved very costly and many systems have failed, hence the dot.bomb period of 2000. The crossover between e-commerce models and e-learning systems certainly could not be achieved at zero or minimal net cost. Despite government funding much of the technological infrastructure, the biggest cost to the universities is in transforming academic processes, such as conceiving, writing, commissioning and paying for content. E-learning portals are expensive to set up and maintain.

An alternative to the central hub may lie in small-scale web sites controlled by individuals or small groups of academics. This approach had its attractions for us. For many like us, it became a personal challenge. If universities were 'slow on the curve' for all sorts of reasons, interested individuals could blaze the trail alone or with a few others, we argued. Doing so turned out to be easier and more fun than we thought it would be.

Besides the technology push, we potentially had the pull of student demand. By the time we started, many of our students were technologically literate, had a job to pay their way through university and were demanding out-of-hours access. Their 24/7 lifestyle demanded a response. We had a vision and we prepared to meet the challenge.

### **Context**

We selected and marshalled academic content which would be useful to our students, of course. We had to teach ourselves some new skills, too. Fortunately, we were both fairly computer literate to begin with. We were early users of PowerPoint software for teaching. Indeed, we

used to give our whole PowerPoint slide portfolio to our students on diskettes to save printing and reproduction costs. We did have to learn how to write hypertext mark-up language (HTML) code, design web sites, capture images using scanners and digital cameras.

Our PowerPoint experience led us to develop a CD-ROM, which was crude at first but improved. At the start, it merely linked the teaching plan to the lectures and to the analysis. From the CD-ROM we built the HTML, full web-based service we now have. Along the way, we learnt to program using Asymetrix's Multimedia Toolbook program suite for the CD-ROMs and, later, the HTML editors for the web pages.

What we did, in effect, was learn how to develop and write a set of electronic teaching and learning materials, available on-line - you could call it an e-book resource - and it is available to all, on the web, free of charge.

### **Description**

When we began to develop our site, we did not have to start from zero. There were several well-known and easily accessible models for building web pages. The question for us was how to mimic the e-learning portal at the micro level of the web site and web page, for our own subject of strategic management.

The model for our web site was adapted from A.T. Kearney's 3-C model taken from their white paper entitled Building the b2b Foundation (1999) - <http://www.atkearney.com/main.taf?site=1&a=5&b=3&c=1&d=4>), originally designed for Internet market makers. We have adapted the original 3-C

model of Commerce, Content and Connection, which became Connection, Content and Community. In a later paper, A.T. Kearney proposed a 7-C model and incorporated this in the white paper called *Creating a High Impact Customer Experience* (2000) - <http://www.atkearney.com/main.taf?site=1&a=5&b=3&c=1&d=10>). These two linked models had been developed by the firm to enable e-commerce companies to design their pages and portals. For our purposes, the adapted 3-C model (Figure 2) explains our underlying design philosophy adequately.

business, management ethics and research methods. These subject fields were of direct importance to us: they were our subject areas of expertise, therefore, we included all four in the model.

Connection to the web site was through two internet service providers; it was controlled by us via passwords and registered web site names. The main name was Strategios, which became the registered home page for the site. Connection through these two servers was quick and straightforward. We were able to upload teaching and other material by using the usual file transfer protocol

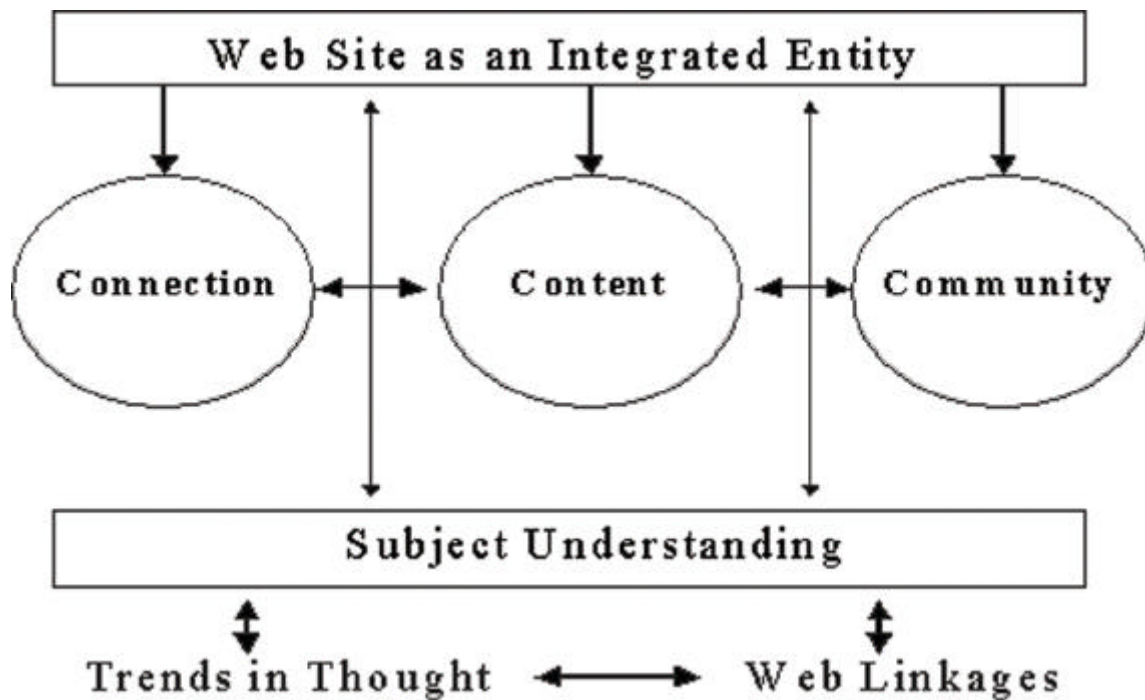


Figure 2: the 3-C Model of the Web Site as an Integrated Entity

We drew a map of the web site consisting of many web pages and sub-directories. This gave us an integrated picture of the design. The front page would be the welcome on entry to the site. The whole conception of the site was to focus on issues linked to the teaching of strategic management, international

(ftp) connections. The design values of the directories, sub-directories and individual files had to conform to the speed of up-load and be visually simple. But we aimed to have rich content and simple design values.

One of our objectives was to create interactivity with the wider scholarly

community. We wanted to create a virtual 'interactive classroom' for our users. Very early on, we decided, that access to the web site would be free to all and not password protected. The foundation of the site was the subject material. We enabled our students and other users to explore trends in the four subject fields, both through content which we had generated and through links to other sites where the subject fields are being developed. For our own students, the site supplemented the material they received in the classroom.

We wrote and still maintain the web pages using Microsoft's HTML editor Frontpage. This allowed us to avoid buying the very expensive but industry standard, web design tool – Dreamweaver. The Frontpage software has the advantage of being integrated into the Microsoft Office suite of programmes and works seamlessly with Word and PowerPoint. Frontpage allows the user to define backgrounds, layouts and page structures. The programme automatically converts the text and graphics into HTML code. The user does not need to know how to program in this code. Pages are stored on disk and we upload them to the site using standard ftp software which we found on a free disk on the cover of a computer magazine. Our costs were thus minimised. We do the uploading from home using standard access facilities available through British Telecom's Openworld. Unmetered Internet access, in recent years, has helped to cap the cost of maintaining the site. Registration of the domain name, Strategios, costs us about £50 a year. By using two web sites linked together, the site has a capacity of over 100mb of space.

Here are some examples of what we have developed, from within our main Strategios site.

1. Students said the **Library** (<http://www.strategios.co.uk/library.htm>) was particularly useful. This page offers links to relevant on-line journals; management consultant web sites which publish their research and key reports; home pages of important academic journals and popular management magazines. Students also find on it other links which may be useful, such as on-line tutorials in using the SPSS package for data analysis, designed and run by an individual at the University of Teesside. A link to the very informative and well-designed site for business education, Bized (<http://www.bized.ac.uk/fme/>), takes users to a wealth of business related material, lecture notes, case studies and other useful information.
2. The **Research Resources** page (<http://www.strategios.co.uk/page3.htm>) has a wealth of information for students doing their research projects and writing dissertations. It takes as its theme an on-line research methods module. Here, the basic menu offers the user key research themes in the form of lectures and links. With links to on-line statistical pages, on-line textbooks and other sites of interest, we attempted to create a holistic module. One very good example of a web-enabled e-book for studying advanced statistics for research analysis is (<http://www.statsoft.com/textbook/stathome.html>). Another example of a web site for studying research methods is Cornell University's

Research Knowledge Database (<http://trochim.human.cornell.edu/kb/>). One of us uses in his classes the lectures that this site makes available as downloads.

A link at the end of the **Research Resources** page takes the user to more material on the research topic and further, to more advanced sites that may be of interest. There will soon be a link to a new module on research methods which is currently on CD-ROM but will be on-line for the 2002-2003 academic year.

3. For the web-enabled module **Corporate Strategy**, the welcome page at <http://www.strategios.co.uk/mb428%20webpage/gbs428.htm> shows simply the module title and semester dates. A click on 'Enter' takes the user to menus for the workbook and the main teaching items. The workbook menu has an introduction and five topics. The teaching material in the workbook is hot-linked to other web sites of potential interest. The main menu includes an introduction to the module; reading resources; a teaching plan with topics linked to the workbook topics and to lecture notes in PowerPoint format; seminar topics with questions and reading lists that may be helpful and contacts and other key information. A final item on assessment completes the main menu.

At the foot of the 'assessment' page are special links to help the user to gain further understanding. For financial valuation theory there is a link to a web site designed by a leading US academic, at: <http://www.stern.nyu.edu/~adamod>

[ar/New\\_Home\\_Page/](http://www.cbi.cgey.com/about/index.html). This site is full of content: it develops theory and examples in a very thorough manner. For student use, it also has numerous cases presented as spreadsheets. Allied to this personal web site is <http://www.cbi.cgey.com/about/index.html> through which students can call up leading research studies on valuations and other papers from and about on-line company financial data, from sites such as Hemscott (<http://www.hemscott.net/>) and Thomson Financial (<http://global.thomsonfn.co.uk/>).

4. **Management Ethics** is another web-enabled module, based on much the same model as *Corporate Strategy* but with somewhat greater web interactivity. In the academic year 2001-2002, Colin Clarke-Hill transferred the teaching material from the site (<http://www.oldredlion.here2stay.org.uk/ethics/mb430.htm>) to a CD-ROM and used it for a distance-learning module, linking together the CD-ROM and the site. The take-up of this optional module was too small for a scheduled face-to-face class so remote delivery with two-live seminars was chosen. On the page, *Theoretical underpinnings*, which is the opening section of the module's workbook, the reader is linked to an excellent, publicly-funded business site called BOLA – Business Online Archive. (<http://sol.brunel.ac.uk/~jarvis/bola/index.html>), run by Chris Jarvis at Brunel University. BOLA has a particularly well-developed set of resources on business topics and, for students of management ethics, explanations of the key philosophers, case studies and

other useful material. By clicking on BOLA's *External links* the user finds links to sites containing reports and white papers on ethical issues from campaigning and research groups in this field. The Christian Aid site is a particularly good example

(<http://www.christian-aid.org.uk/indepth/fulllist.htm>), like that of the ethics research group at the University of British Columbia in Canada (<http://www.ethics.ubc.ca/resources/business/>).

## Evaluation

If we give the impression that the Strategios site was created in a few days, please can we dispel that notion forthwith. The site as it stands has evolved over four years. It takes a considerable amount of time and effort to create, write and design the material

material has to be structured for remote access, links have to be discovered and evaluated before they can be recommended for use and the new pages have to be uploaded on to the site. Regular maintenance is essential to keep the material up to date and all the links working.

Up to 2001, we used both a CD-ROM and our web site. The web site was less well developed and we depended on the CD-ROM. Our students told us what they thought of both and we dropped the CD-ROM as a result of re-thinking our teaching strategy (Clarke-Hill & Kuhanen 2000). We put much of the CD-ROM material, re-formatted in HTML, onto the site. We learnt from our students' experience and our site as a whole benefited.

Today, students and academics heavily use our web site. We know this through traffic data. Data for the site as whole are difficult to obtain in

DESCRIPTOR	7 DAYS TO 01 MARCH 2002	7 DAYS TO 10 MAY 2002
Successful requests	611	420
Average successful requests per day	87	61
Successful requests for pages	221	177
Average successful requests for pages per day	31	25
Distinct files requested	50	50
Distinct hosts served	137	136
Data transferred	25.4 1mb	14.2mb
Average data transferred per day	3.65mb	2.01mb

*Source: Web log data supplied by the Internet Service Provider.*

**Table 1: Web log data for *Management Ethics* in two seven-day periods in February-March and May 2002**

ready for web site formatting. The

usable form but we know that traffic

flow data for the key pages make interesting reading. For example, we extracted data for page traffic for the MB428 *Management Ethics* sub-directory, accessed from the menu page through the link entitled 'Colin's Page' (<http://www.strategios.co.uk/colinmenu.htm>) Table 1 shows figures for two periods in 2002.

The web logs track every keystroke made by visitors to the site. They note each page request, where it came from and even what link was selected, by time, in the most minute detail. From such data, we know that in February-May 2002 the site was particularly popular with users from the UK, Australia, France, Canada, the USA, Greece, Malaysia and South Africa. Users from both commercial companies and academic institutions used the MB428 Management Ethics sub-directory in equal measure. In an average week, it registered some 400 page requests, with a download of some 18mb of data transferred. The highest number of requests for pages came in the week ending March 1, when 611 successful requests were logged and 25.4mb of data transferred. Two months later, in the week ending May 10, there were 420 requests for data and 14.2mb was transferred. When we looked at the web logs for the quarter as a whole, the popular times for users to be on-line was between 1300 hours and 2000 hours at the weekend from Sunday to Tuesday. For the two weeks shown in Table 1, visitors to the pages came from 135 different locations, with about 26 percent of visitors from the UK.

The web log data, as displayed Table 1, certainly indicate that this directory is very popular and we have grounds to believe the site as a whole is popular too. Our detailed discussions with students support this view. At

both our universities, evaluation questionnaires at the end of modules contained specific questions about the web site and most students have evaluated the site very positively. They rated highly factors like interactivity, web links and informative content. The popular pages with many students were the 'library links' that took users to the key journals and other on-line sources. Students who were building up bibliographies for projects and essays found this facility particularly useful. On the other hand, students found the lack of on-line full text material frustrating. This problem cannot be avoided due to copyright.

Final year undergraduates and MBA students were particularly complimentary about the research resources page. We do expect to revise this page, however, because in many institutions the teaching of research methods is often poorly backed up with materials. We think an on-line source would be a possible solution. Interestingly, our students now *expect* such a site as a given for their courses and do not find our approach idiosyncratic. The pressure placed by students on colleagues who do not follow such a path could be quite intense.

## Discussion

We can build parallels between the experience of commerce and the university. If we return to our earlier point that Internet technology is seen as providing a solution to reducing cost transactions and other associated costs of running a business, this is, I believe, a myth. The literature and commercial history on this point is instructive. Read the excellent articles on e-marketing failures by Varianini and Vaturi (2000) and that of Brash, Crawford and Grosso (2000) on the

problems that e-retailers had in using their business models centred on their value chain costs and revenues. In particular, see the data the latter authors display in exhibit 1 (page 100) on how e-tailers destroyed value with their Internet business models.

On the role of the Internet in business and business processes, there is an interesting debate surrounding the differing views of Tapscott (2001), ([http://www.dontapscott.com/Strategy\\_Business.pdf](http://www.dontapscott.com/Strategy_Business.pdf)), on the one hand and Porter (2001) on the other. Tapscott argues that the Internet can lead to serious and far-reaching transformations in how businesses (and, by association, universities) work. This technology allows for what can be termed radical business model innovation. Brash, Crawford and Grosso (2000) have shown us convincing evidence of the downside to such radical transformations and over-optimistic business assumptions. Universities would certainly like to see the attack on costs which could follow introduction of the technology but are reluctant to embark upon the transformation in the staff and businesses processes which would follow. They should, indeed, be cautious about overblown claims for this technology. Porter (2001) does not deny this and strongly advocates caution. He exhorts business leaders to 'return to fundamentals' and to abandon any thoughts of new business models or e-business strategies and encourages managers to see their Internet operations in isolation from the rest of the business. According to Porter (2001), "...we need to see the Internet for what it is: an enabling technology. It is a powerful set of tools that can be used wisely or unwisely, in almost any industry and part of almost any strategy". Porter further calls for

integrating this technology into the overall strategy of the business if it is to be leveraged for competitive advantage. Vice-Chancellors please note.

Tapscott (2001) sees that, in the future, strategies will no longer look at the integrated corporation as the starting point for creating value, assigning functions and deciding where the firm's boundary lies. Rather, managers will start with the customer's value proposition and a blank slate for the production and delivery system to be built around the customer: in other words, this is a radical form of customisation. A firm will be part of a business web (b-web) that allows a lead firm to choreograph the process, acting as a context provider and different firms in the b-web will service the customer in different ways but in a co-ordinated and seamless manner. Businesses, Tapscott argues, will operate within extended boundaries and in multiple and overlapping b-webs, depending on their relative position in the value chain. Exponents of this view term this the extended enterprise and embedded enterprise.

Synthesising these two opposing views and putting them in context of this article is not difficult. Clearly, there is significant scope for the development of e-learning systems using portals, databases and associated tools. Starting with the student as user (customer?) and building customised delivery of appropriate teaching and learning materials is both possible and desirable. Whether this will produce any significant cost savings is debatable. No doubt, universities will have to transform their business models very radically, perhaps question their very existence as an

academy in the classical sense. They should heed Porter's (2001) view and see this technology as 'enabling'. Doing so would allow for a mixed strategy to be adopted: the traditional with the technology, hugely advantageous to the student who would get the best of both worlds.

If we take on the Tapscott (2001) view of extended enterprises based on intricate and overlapping b-webs, then we can see new horizons for the university and indeed for the student. Expertise can be located at different points in the b-web and differential advantages of individual universities can be leveraged for the system as a whole.

In both cases, there are practical difficulties which will need to be overcome. Business model transformations are inevitable as digital convergence becoming an increasing reality. Vice Chancellors will have to fund the intellectual efforts which will be needed to create these b-webs and the content therein. Universities will have to become adept at managing such complexity as is created by overlapping b-webs.

These b-webs, or perhaps learning webs or l-webs, will also change the nature of the university's rationale and the university teacher's role from that of a lecturer to that of a content provider. Familiar learning and teaching models may need to be redesigned. The student as the central focus will have to take personal ownership of his/her own learning. The onus to plan and execute learning, with web-enabled tools as a guide, will shift from the university to the individual.

To conclude, then, at the present moment of development in our

universities, we do not advocate centrally controlled learning webs based on central portals and huge data base provision linked to customisation systems. They are technically possible and likely to happen but very expensive to implement and, in our view, potentially alienating. We advocate instead a distributive model of subject-based web sites, controlled by individual academics or small groups creating their own communities of l-webs with colleagues in other universities. These sites should, in our view, be accessible free of charge and co-operative in nature within the wider scholarly community. We also advocate that, in the interim, academics develop these extended subject webs themselves and thus keep control of their intellectual property and be free from the dead hand of bureaucracies which universities so brilliantly develop.

We have shown how we realised our vision for our site. We shall continue to develop it as a personal attempt to create a subject l-web to serve our students' needs and hopefully provide useful links to the wider academic community on the Internet. We have also shown some examples of sites created by individuals or small academic groups which advance research, knowledge and dissemination of their subject fields to the wider academic community. We feel it is a privilege to be part of this movement.

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