Oxford Institute for Sustainable Development (OISD) Newsletter

November 2008 Issue 3

OXFORD BROOKES UNIVERSITY

School of the Built Environment

Cover image by Rabet Eshaghi

INTRODUCTION AND OVERVIEW

Welcome to the third issue of the OISD newsletter! As you will see, the last six months have provided OISD with some excellent opportunities to showcase and highlight the quality of the research we produce.

As we enter an economic downturn, and almost certain global recession, many sceptics are arguing that sustainability will drop off the agendas of businesses more concerned with fallout from the credit crunch than the 'froth' of going green. A recent MORI poll, for example, showed that only 10% of people placed 'environment' in their top three concerns compared with one year ago. In other words we could face an 'eco-crunch'.

Although this view is partly based on the fact that green politics declined during the 1990s recession, as economic conditions worsened, there are several reasons why sustainability will become even more important than it is today. After all, when thrift is the order of the day, doesn't the green agenda have even more to offer than it does during boom times?

It is clear that the recession will highlight which organisations are truly committed to sustainability, but in a world where competitive edge still matters, CSR and sustainability will continue to carry weight. It's also fair to say that innovative and cost-effective green technologies will also continue to grow in importance, and if energy (and food) prices continue to rise, it is not hard to imagine that business and domestic consumers will need to focus even more closely on how best to reduce such costs. Although expensive and inappropriate 'eco-bling' will suffer, won't basic energy-saving technologies become even more important therefore? Also, as fewer people move home they will surely be prepared to invest more in their properties to reduce energy costs, provided that this can be incentivised.

In the world of property, and in terms of legislation and regulation we already have the impact of the European Energy Performance of Buildings Directive working its way through the domestic and non-domestic property markets, and with a non-domestic system based on EPCs and DECs, linked with a revamped BREEAM 2008, we can also expect to see the emergence of a Code for Sustainable Non-Domestic Buildings. But will we see more legislation to tighten environmental rules and targets, or less, because government fears stifling business?

UK GREEN BUILDING COUNCIL Member

If the UK government is to meet targets of a revised 80% reduction in carbon emissions by 2050, and a 15% renewables figure by 2020 (set by the EU), we will surely start to see movement and changes in the fiscal landscape to encourage people and property to go green. The emergence of a new Department of Energy and Climate Change, and commitment in principle to 'feed in' tariffs, is also an indication that the government is now taking the issues of both energy efficiency and climate change very seriously. Can we also expect to see therefore a progressive and green tax system (perhaps even a 'Green New Deal') emerging that tackles social justice and sustainability, and helps drive us towards a zero-carbon future by 2020? The work of the IFS's Mirlees Review of the UK tax system may also give some pointers here, when its findings emerge later in 2008.

What is also clear to us in OISD is that there is even more of a need to partner with business, and with end users, in ensuring our research does continue to make a real difference in influencing policy and practice. Over the last six months we have developed strong partnerships with Capita Symonds, Savills and AEA Technology; we have responded to the RCEP's call on 'Adapting the UK to Climate Change' and other consulations; and our work has been featured in important policy and guidance both nationally and internationally.

As the economic climate changes, we believe it will be even more important to undertake research which continues to prove the case for a sustainable built environment.

If you would like to see more about our work please visit: http://www.brookes.ac.uk/schools/be/oisd/

Professor Tim Dixon
Director of the Oxford Institute for Sustainable Development (OISD)

Social Sustainability Research Project

Mark Hirst, Director of Development Planning, Capita Symonds

"The definition of what constitutes a sustainable community has developed as the thinking behind the influences on these communities has matured. The creation of a sustainable community is recognised as having at its core social, economic and physical factors. However social sustainability, until now has received little or no attention in terms of the importance of understanding the role that social issues play in defining and achieving sustainability.

The drivers that are behind the way our cities and neighbourhoods grow are increasingly social and governed by networks, information, locality, diversity and flexibility. We need mechanisms for embedding our spaces and developments with the capacity and social strength to respond positively to these new drivers. Developers are not simply investing in just bricks and mortar or portfolios of units for sale but in the accompanying "Social Capital" that is vital for making a place work.

We must continue this movement away from divorcing the processes involved in building buildings and the processes involved in creating our lives in and around them. The two interact in a myriad of complex ways. They do not occupy separate spheres, but exist together either in conflict or harmony. It is when conflict arises that we see most clearly the importance of unifying building and social processes.

Capita Symonds Ltd and OISD have come together to explore practical measures for delivering social sustainability through the development process for the public and private sectors. We look forward to developing this partnership".

CAPITA SYMONDS

Response from Professor Tim Dixon, Director of OISD

Our relationship with Capita Symonds continues to grow. The work that OISD is carrying out on social sustainability related to design elements within the urban environment (Professor Georgia-Butina Watson's work for Urban Buzz); residential density and neighbourhood within the urban fabric (the EPSRC City Form initiative based at Oxford Brookes); and research which is examining how social sustainability can be measured (the EIB funded EIBURS project in OISD: ILM), all link with Capita Symonds' interests in the field.

Our partnership with Capita, will, we hope, lead not only to further funded joint research in the field, but also the opportunity to focus on longer term collaborative bids for consultancy and research projects. This is vitally important, given the UK research councils' focus on end user and key stakeholder partnerships in both programme-based calls and responsive mode bids. We believe that our relationship with Capita represents an excellent example of how OISD is developing a series of joint ventures with allied end users and other companies in the field of sustainable development research.

RICS/OISD Conference: 'Sustainability still matters in a credit crunch'

Despite warnings about an 'eco-crunch', sustainability will continue to be a critical dimension within the built environment sector, delegates heard at the recent RICS/OISD conference on 'Creating a Sustainable Built Environment'.

The evening conference, which was held on 14th October at Oxford Brookes University, brought together more than 25 delegates from RICS membership in the South East Region from surveying and architecture practices, and the private and public sectors, and covered three main dimensions to OISD's work:

- Sustainability and value;
- Inclusive design; and,
- Post-occupancy evaluation.

Introducing the conference and the work of OISD, Professor Tim Dixon (Director of OISD and Professor of Real Estate) said that:
'Although the credit crunch is starting to bite, the sustainability agenda is with us for the long term. Sceptics have argued that cost constraints will mean an 'eco-crunch', but the strong likelihood is that legislation, innovation and competitive edge will continue to drive the sustainability agenda in the built environment. Research that addresses the barriers to sustainability in the changing economic climate, and develops cost-effective technologies will therefore be even more important to undertake'.

Dr Claire Roberts presenting on the IPF research

Dr Claire Roberts and Dr Sally Sims gave presentations related to continuing research work in OISD: ILM on 'sustainable offices' (funded through IPF) and 'renewables and

value' (funded by RICS). Both speakers highlighted the importance of value impact and payback in terms of the 'sustainable features' in commercial and domestic properties, and in overcoming the barriers to sustainability in property markets.

Lynne Mitchell (OISD: WISE) gave an overview of her work with Professor Elizabeth Burton and other colleagues on inclusive design for older people, focusing on 'neighbourhoods for life', and their highly rated EPSRC I'DGO research. This was followed by Dr Fionn Stevenson's (OISD: Architecture) presentation on post-occupancy evaluation, focusing on end users and their behavioural patterns in buildings, and also highlighting the ground-breaking wireless technology being used by OISD researchers to assess levels of energy use in a real home occupied by a young family.

Martin Russell-Croucher, Director of Accreditation and Certification at RICS, who attended the conference said: *"The RICS South East 'Creating a Sustainable Built Environment conference' at Oxford Brookes University demonstrated the depth and quality of the research being undertaken at OISD/Oxford Brookes in key areas of interest to property and built environment professionals"*.

Alison Adams, Event Co-ordinator, RICS South East said: *'The conference provided a great forum to demonstrate the work of the OISD. The differing topics and speakers gave a very interesting insight into various aspects of sustainability in the built environment, and the feedback from delegates on the quality of the conference was extremely complimentary'.*

Institute of Civil Engineers awards Howard medal to BE staff

Dr Xiaoxin Wang, Dr Chris Kendrick, Professor Ray Ogden and Dr Nick Walliman have been awarded the Howard Medal from the Institute of Civil Engineers for their paper 'VIP and their applications in buildings: a review'. The paper explores aspects of the materials science that has informed recent research carried out by OISD: Technology to develop novel forms of highly insulated cladding panels (approximately six times more insulating than conventional technologies).

Professor Ray Ogden (Group Leader of OISD: Technology and Assistant Dean Research) said: *"The Howard Medal founded in 1872 typically goes to Civil Engineering based research groups. It has been awarded twice to Napier University in the last three years and once to Cambridge University. Winning it is a real recognition of the unusual quality of interdisciplinary activity in the technology area within the School of the Built Environment at Brookes"*.

Left to right: Dr Nick Walliman, Mr David Malcolm Orr (ICE President), Prof Ray Ogden and Dr Xiaoxin wang

The Awards Ceremony was held in the Great Hall at the ICE (London) on Friday 24 October 2008.

Prof Ray Ogden is chair of the International Scientific Committee for Vacuum Insulation. He and the team at Oxford Brookes are working in collaboration with Cambridge University Department of Engineering, to organise the 9th International Conference on Vacuum Insulation and advanced insulation technology.

OISD research is highly rated by EPSRC

Two recent research programmes based in OISD and funded through the Engineering and Physical Science Research Council (EPSRC) have been rated as 'tending towards outstanding' by independent reviewers and the EPSRC panel.

Professor Fergus Nicol's work with Dr Hom Rijal and Rev Professor Michael Humphreys (all based in OISD: Architecture) on 'Predicting the effect of occupant behaviour on thermal comfort and energy use in buildings' used user surveys to build a model of the use of simple controls such as windows and fans in naturally ventilated buildings. The model of occupant behaviour fed in to dynamic simulation techniques. In a practical sense the project has given building designers and other end users a method for predicting the future risk of discomfort and energy use in occupied naturally ventilated buildings accounting realistically for occupant behaviour. The work was conducted in partnership with Professor Joe Clarke and Dr Paul Tuohy of the University of Strathclyde.

The work of the EPSRC SUBR:IM consortium which featured Professor Tim Dixon's (OISD: ILM) research on the 'Role of the Development Industry in Brownfield Development' also received a high rating. Finding Solutions to the problems of developing brownfield land was the goal of SUBR:IM (Sustainable Urban Brownfield Regeneration: Integrated Management), which ran from July 2003 until July 2007. Funded by EPSRC under its Sustainable Urban Environments initiative and the Environment Agency, it drew together ten major academic and research institutions in a programme designed to improve the quality of urban environments. The Consortium aimed to develop technical solutions and tools for restoring brownfield land in urban areas, whilst at the same time increasing the knowledge base of all stakeholders involved in such development. This included investors,

developers, planning bodies and local authorities, but also the general public and engineers who work with such problems.

Professor Tim Dixon, Director of OISD, said:
'We are delighted to receive these ratings for our EPSRC work, which are testimony to the excellent track record of quality outputs in our EPSRC-funded work. Fergus Nichol's work is internationally recognised and the work of SUBR:IM has influenced policy at a national level. We intend to build on these successes with other well-focused proposals and bids to EPSRC'.

WISE words
Lynne Mitchell and Professor Elizabeth Burton

The WISE (Wellbeing in Sustainable Environments) research unit sits within OISD's Sustainable Urban Environments group. A key aim of WISE is to contribute to the creation of more sustainable communities by investigating, through high quality research, how the built environment should be designed to optimise people's wellbeing, mental health and quality of life, key components of social sustainability. The unit attaches particular importance to cross-disciplinary working, generation of relevant, practical guidance and wide dissemination to professional and user groups (through books, papers, workshops, leaflets and design checklists).

WISE researchers

WISE has developed an international reputation for research into the design needs and preferences of older people, particularly those with dementia. Most older people, including those with mild to moderate dementia, live in their own homes and would prefer to do so for as long as possible. However, the design of the outdoor environment often creates barriers for older users which restrict their ability to get out and about and can cause some people to become effectively housebound. This has a negative impact on older people's physical health and on their sense of wellbeing and quality of life. From our research we have developed the concept of Neighbourhoods for Life (sometimes referred to as Streets for Life) which aims to support independence in old age by providing an outdoor equivalent to Lifetime Homes and by extending the inclusive design concept to the neighbourhood scale. This has recently been referenced in the UK government's National Strategy for Housing in an Ageing Society: Lifetime Homes, Lifetime Neighbourhoods (DCLG, 2008).

OISD-A: Spreading the word on Low carbon building design and performance

Amidst the backdrop of increasing environmental and legislative imperatives to design, build and manage low carbon buildings, OISD: Architecture has been commissioned by a leading architectural practice, PRP Architects, to deliver six day-long CPD sessions (September 2008-November 2008) on 'low carbon building design and performance' across its offices in London, Surrey, Milton Keynes and Manchester. The CPD course which draws from OISD:A's cutting-edge research on carbon-counting and carbon-reduction from buildings, is designed for practicing architects to develop an evaluative understanding of the, principles of passive solar design and low/zero carbon building technologies.

The course is being successfully delivered by OISD:A members: Dr Rajat Gupta, Mary Hancock and Smita Chandiwala with valuable support from Paola Sassi and Dr Fionn Stevenson.

Overall, the CPD has been well-received and deemed useful and relevant, as evident from the positive feedback received from the four concluded sessions in September and October 2008.
"There was a great deal of information to take in but it was presented well and the tasks were really good."

CityForm-India: sustainable urban form in India's rapidly growing cities

On 21 August, 2008, in New Delhi, the Cityform-India: Sustainable Urban Form for Indian Cities conference was held at The National Institute of Urban Affairs (NIUA), co-organised by the Oxford Institute for Sustainable Development (OISD). The conference focused on the need to examine sustainable urban form in India, where cities are growing at a rapid rate. India's towns and cities are home to approximately 286 million residents – almost 28% of India's 1.03 billion people. Delegates came from all over India to attend and Dr. M. Ramachandran, Secretary, Ministry of Urban Development opened the conference. In his inaugural address, Dr Ramachandran highlighted the importance of examining the whole gamut of themes related to sustainable development, including polycentric urban forms, transport infrastructure and new technology. He also talked about the significant role that OISD has played, and continues to play, in the global debate on sustainable urban form.

The conference forms part of an international, multidisciplinary research collaboration, Cityform-India which OISD: Cities and NIUA will be leading. The aim of this project is to examine

how and in what ways urban form contributes to sustainability in rapidly growing cities in India. Initial membership in this collaborative team includes leading experts in built environment research from Centre for Environmental Planning and Technology (CEPT) Ahmedabad, School of Planning and Architecture (SPA) Delhi, and Delhi School of Economics in India and, in Europe, OISD, Heriot-Watt University and University of the West of England, and also Milan Polytechnic, Italy. The Indian Ministry of Urban Development has shown a very keen interest in CityForm-India and has pledged to support the research network by making government funding available for initial research to be carried out. This pilot research and a number of networking activities will be conducted to clarify the key themes, research approach and methodology for a larger 4-year project.

For more information, contact Dr Shibu Raman skraman@brookes.ac.uk or visit www.city-form.org

Launch of 'World Cities and Urban forms' book co-edited by Prof Mike Jenks. From left to right: Dr Shibu Raman (sitting), Prof Chetan Vaidya (Director, NIUA), Dr Ramachandran (Secretary, Ministry of Urban Development) and Mr Nitin Desai (President, NIUA)

OISD:ILM research influences national and international policy and practice

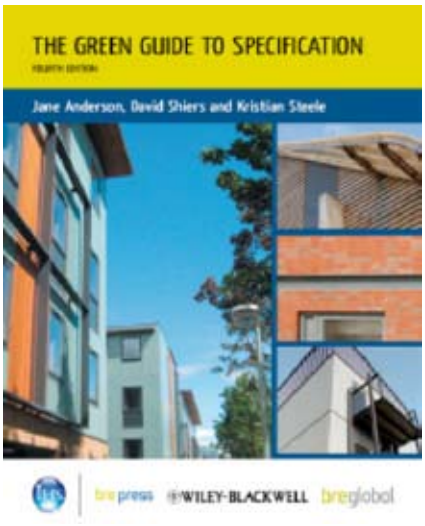
Work by OISD: International Land Markets (ILM) researchers, and indeed other groups within OISD, continues to influence policy and practice in the built environment. Two recent examples of the ILM group's work highlights this important linkage.

The first example is the work within the ILM group on Socially Responsible Property Investment. This work, which was undertaken recently by David Shiers and Dr Claire Roberts (with Miles Keeping, now GVA Grimley and Dan Rapson, now AEA), was referenced in an important new United Nations Finance Initiative Report (UNEPFI) prepared by Professor Gary Pivo of Arizona University, and entitled 'Building Responsible Property Portfolios'.

The second example is the continuing work of David Shiers with the Building Research Establishment (BRE), and the launch of the new Green Guide to Specification (Fourth Edition). Co-authored with Jane Anderson and Kristian Steele, and forming a key part of BREEAM 2008, the fourth edition of The Green Guide to Specification was launched in an on-line form in June 2008 (See www.thegreenguide.org.uk). The printed version, which includes a Foreword by Jonathan Porritt, is now in the final stages of editing and is expected to be available in January 2009.

The Green Guide to Specification
Like its predecessors, this fourth edition of The Green Guide to Specification provides designers and specifiers with easy-to-use guidance on how to make the best environmental choices when selecting construction materials and components. It is more comprehensive than its predecessors containing more than 1200 specifications used in six types of building:

- Commercial buildings, such as offices
- Educational buildings, such as schools and universities
- Healthcare buildings, such as hospitals
- Retail
- Residential
- Industrial.



David Shiers said:
"The completion of this work comes at an important moment. The recently up-dated BREEAM and Code for Sustainable Homes programmes require the use of 'Green Guide' and it was important to ensure that designers and other property professionals have access to the most up-to-date research on the environmental impacts of construction materials. The Green Guide is also cited as the key reference for materials in the UK Government's 'Strategy for Sustainable Construction' (June 2008) and so it is reassuring to know that the industry will no longer be relying on the 3rd edition of Green Guide, which uses data which is now six years old."

Jonathan Porrit writes in the foreword:
"Such accessible and reliable information will be of great assistance to all those involved in the design, construction and management of buildings as they work to reduce the environmental impact of their properties.

We are sure that this book will help to ensure that in the future, property professionals will be able to make the soundest possible environmentally responsible choices in their materials selection."

OISD responds to major RCEP Consultation

The Royal Commission for Environmental Pollution (RECP) recently called for responses to its consultation on 'Adapting the UK to Climate Change'. The Commission's aim is to provide an authoritative analysis and report on the institutional capacities and arrangements necessary to adapt to changes in the natural environment brought about by climate change.

The focus of the study is on whether the UK has the institutional capacity and arrangements necessary to adapt to changes in the natural environment brought about by climate change. The scope of the study is the UK in an EU context, and to help illustrate the issues, the Commission invited evidence based on three exemplar subjects:

- Biodiversity, nature conservation and protected areas
- Sea-level and coastal zones
- Freshwater.

Given OISD's expertise and track record in this area, a response to the consultation was co-ordinated by Dr Elizabeth Wilson and Dr Jake Piper of the OISD: Impact Assessment Unit. The IAU (Director: Dr Graham Wood) is a designated EC Europa Centre of Excellence in Environmental Impact Assessment (EIA), which brings together one of the largest teams of expertise in this field worldwide. OISD: IAU clients include, amongst others, the European Commission, UK government/agencies, local government and the commercial sector.

OISD:UPM research for NESTA shows that 'history matters' for Britain's city regions

A major new research report co-authored by Professor James Simmie, Dr Juliet Carpenter, and Andrew Chadwick of OISD : UPM (and Department of Planning) with Professor Ron Martin of Cambridge University suggests 'history matters' in understanding which are the most and least successful city regions in Britain.

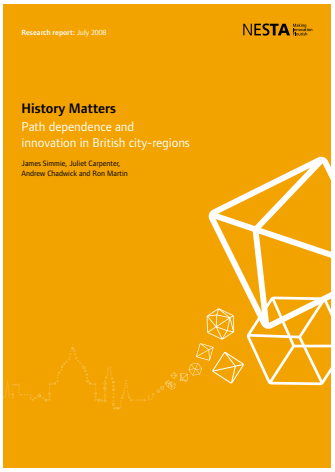
The new report, published by National Endowment for Science, Technology and the Arts (NESTA), is entitled 'History Matters: Path Dependence and Innovation in British City Regions', and focuses on evolutionary economics and models of path dependence to explain differences in growth and performance amongst Britain's city regions over the last 20 years.

In the context of the impending global economic recession, understanding what makes for successful city regions is vital if we are to understand the big picture within our major conurbations. At the heart of this is the concept of 'innovation' which is commercial exploitation of new knowledge and ideas, driven by research investment, science park growth and the links between universities and commerce and business.

Buoyed by the success of Silicon Valley, Hsinchu region, or Helsinki, innovation is seen by leading regions as the key to staying ahead; in those that lag, as an opportunity to catch up. The result has been a plethora of ambitious innovation strategies. Unfortunately, the common thread has often been under-delivery.

The results of this new research contain important lessons for national and regional economic policymakers. Developing new 'pathways' for economic development depends, to a large degree, on a city-region's local innovation system and absorptive capacity. However, individual policy interventions are likely to have little impact on economic development if they do not take into account previous economic structures and their legacy. Perhaps most importantly, policymakers must be patient and allow major interventions time to bear fruit.

Jonathan Kestenbaum CEO, NESTA in his foreword to the report writes: "This work feeds into a wider body of work that deals with the spatial aspects of innovation policy. Its insights underpin many of the practical programmes we have underway at NESTA and it forms the backdrop to our work with the nations, cities and regions that make up the UK".



FORTHCOMING EVENTS

Date	Course/Conference Title
2008	
Thursday 4 December	Upgrading impact assessment for greater effectiveness
Three days conference Friday 12 to Sunday 15 December	IASTE Conference: the 11th Conference of International Association for the Study of Traditional Environments (IASTE): 'Interrogating Tradition: Epistemologies, Fundamentalisms, Regeneration and Practices'
Tuesday 16 December	Introduction to the Planning Process
Thursday 18 December	Screening, Scoping and ES Review Under the 1999 Environmental Impact Assessment Regulations
2009	
Will start in January 2009	Certificate in Strategic Environmental Assessment by Distance Learning: 15 days work of a CD and Web-based distance-learning certificate course on SEA run by Dr Riki Therivel. It could count for CPD (Continuing Professional Development) credits and 20 CATS at M Level credits, for those who want an academic qualification.
Two day course Tuesday 13 & Wednesday 14 January	Strategic Environmental Assessment & Sustainability Appraisal

Wednesday 4 February	Energy Conservation and Historic Buildings
Date TBC 10 week evening course	A Certificate in Environmental Assessment: Procedures & process
March/April Date TBC	OISD Climate Change event
Thursday 17 to Friday 18 September	IVIS 2009, 9th International Vacuum Insulation Symposium. Royal Institution of Great Britain, London.

The above are the confirmed courses to take place however; we will have additional courses taking place that have not as yet been confirmed. Please visit our CPD website: http://www.brookes.ac.uk/schools/be/planning/shortcourses. Here you will find up to date information regarding our CPD programmes, publicity brochures and booking details

Contact: Karen Hughes, Short Course Co-ordinator
khughes@brookes.ac.uk or Tel: 01865 483560 Fax: 01865 483406

Example of Recent Grant Successes and Outputs

Successful bids (May-Nov 2008)

Client/Funder	Project title	OISD researcher	Total Value
Momenta	Architype KTP	Mary Hancock	£111,393.00
Living Steel	Building physics analysis, monitoring and construction audits of Living Steel demonstration projects (additional work: China and Russia)	Christopher Kendrick	£86,960.00
Steel Construction Institute	ROBUST	Christopher Kendrick	£38,880
RICS	Green Gauge Annual Survey	Tim Dixon	£26,750.00
Brett Martin Daylight systems	Dynamic thermal simulation study	Christopher Kendrick	£11,000.00
CORUS	Thermal modelling of building details	Shibu Raman	£9,900.00
Osaka University/Kajima Foundation	Joint Japan-UK project on Brownfield Land	Tim Dixon	£9,400.00

Recent publications – Books

Book title	Year	Author	Publisher
Introduction to EIA – Chinese version	2008	John Glasson, Riki Therivel and Andrew Chadwick	Chinese Chemical Industry Press
The use and misuse of noise standards- Standards and Thresholds for Impact Assessment	2008	Riki Therivel and C. Bennett	Springer

Other reports

Title	Year	Author	Publisher
History Matters: Path Dependence and Innovation in British city-regions	2008	James Simmie, Juliet Carpenter, Andrew Chadwick and Ron Martin	Oxford, NESTA
Green job creation through sustainable refurbishment in developing countries	2008	Ramin Keivani, Joe Tah, Esra Kurul and Henry Abanda	ILO

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