



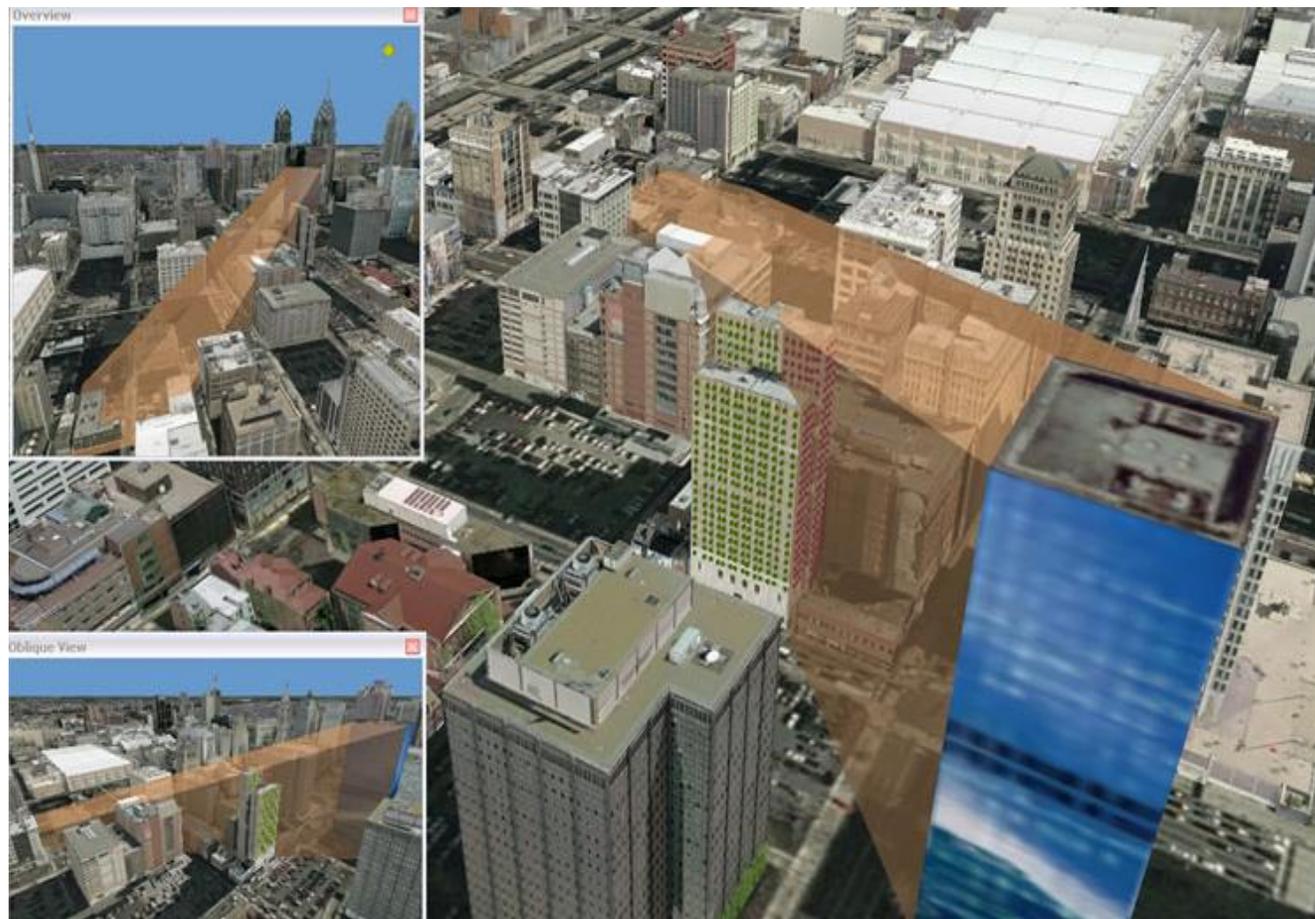
城市規劃的新方法：地理設計

健行科技大學 應用空間資訊系

系主任 黎驥文

大綱

- * Geodesign簡介
- * Geodesign的發展現況
- * Geodesign與城市規劃
- * 結語



Geodesign簡介

What is GeoDesign?



Geodesign簡介

地理設計提供了一個設計架構以及可供專業人士運用的地理資訊支援技術，以使設計能更緊密的與自然生態系統結合。



Geodesign is a method which tightly couples the creation of proposals for change with impact simulations informed by geographic contexts and systems thinking, and normally supported by digital technology.

—Michael Flaxman and Stephen Ervin, 2010

Geodesign is an invented word, and a very useful term to describe a collaborative activity that is not the exclusive territory of any design profession, geographic science or information technology. Each participant must know and be able to contribute something that the others cannot or do not . . . yet during the process, no one need lose his or her professional, scientific or personal identity.

—Adapted from C. Steinitz, 2012, A Framework for Geodesign, Preface

Geodesign簡介

地理設計(Geodesign)是個新興的，能夠集多學科和GIS 技術於一體的新領域。它是一套對人工及自然環境進行綜合規劃過程中產生的技術。它在規劃概念階段、分析、具體設計、利益方的參與合作、創新設計、模擬和評價中起著技術支撐作用。它借助**數位化的電腦技術（CAD、BIM、GIS）**和**交流技術**來支撐資訊化設計，並及時回饋所提方案的含義，包括大範圍的、錯綜複雜的、或長時間維度的影響分析與評估。這一新的Geodesign形式為在可持續的、綜合性的設計過程中實現最大化正面影響（並最小化負面影響）提供了可能性，更重要的是Geodesign為錯綜複雜的、大尺度的、甚至在世界範圍內的分析提供了可能，而這些正是**促進可持續城市化與地球生存**的有效途徑。

Geodesign簡介



Geo-design Workshop

空軍總部再利用

開幕茶會
3/30(日)
14:00-15:00

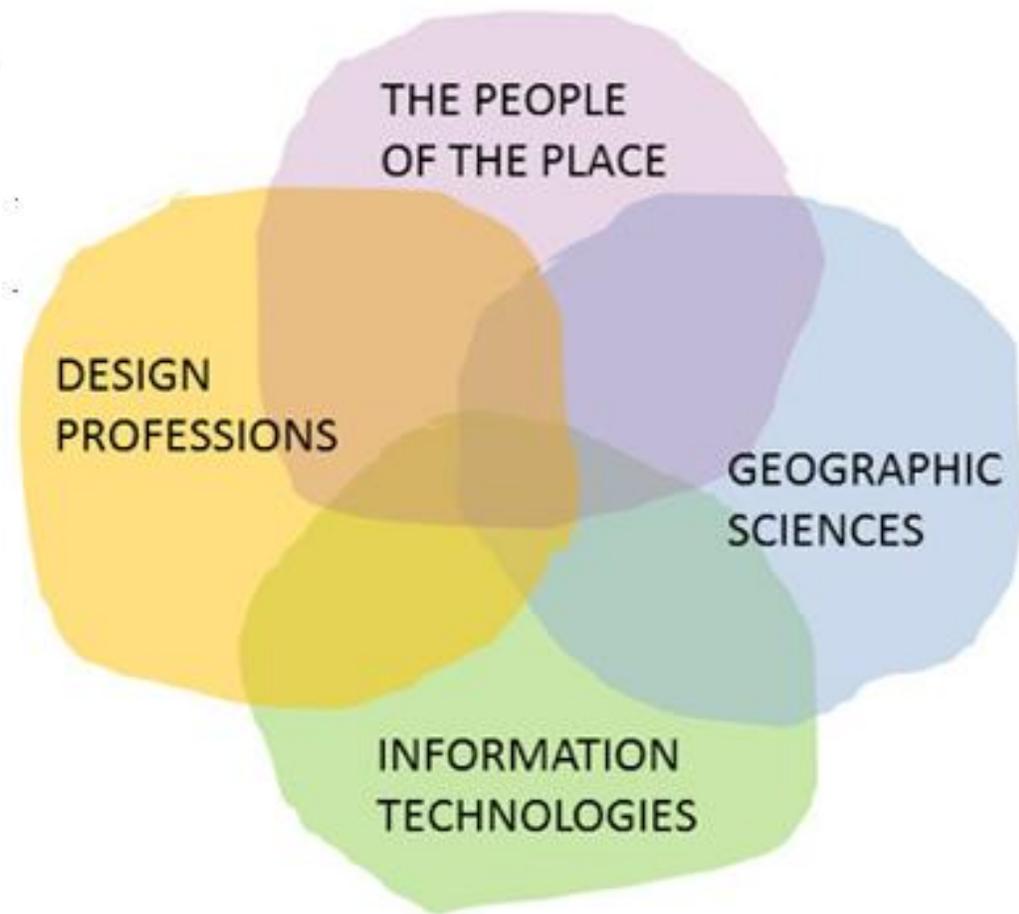
對於一塊基地的規劃，
你期待是一個甚麼樣的過程？
交由政府決定？
傳統的、制式化的流程？
跨領域合作？
或是一個更有系統的參與式操作方法？

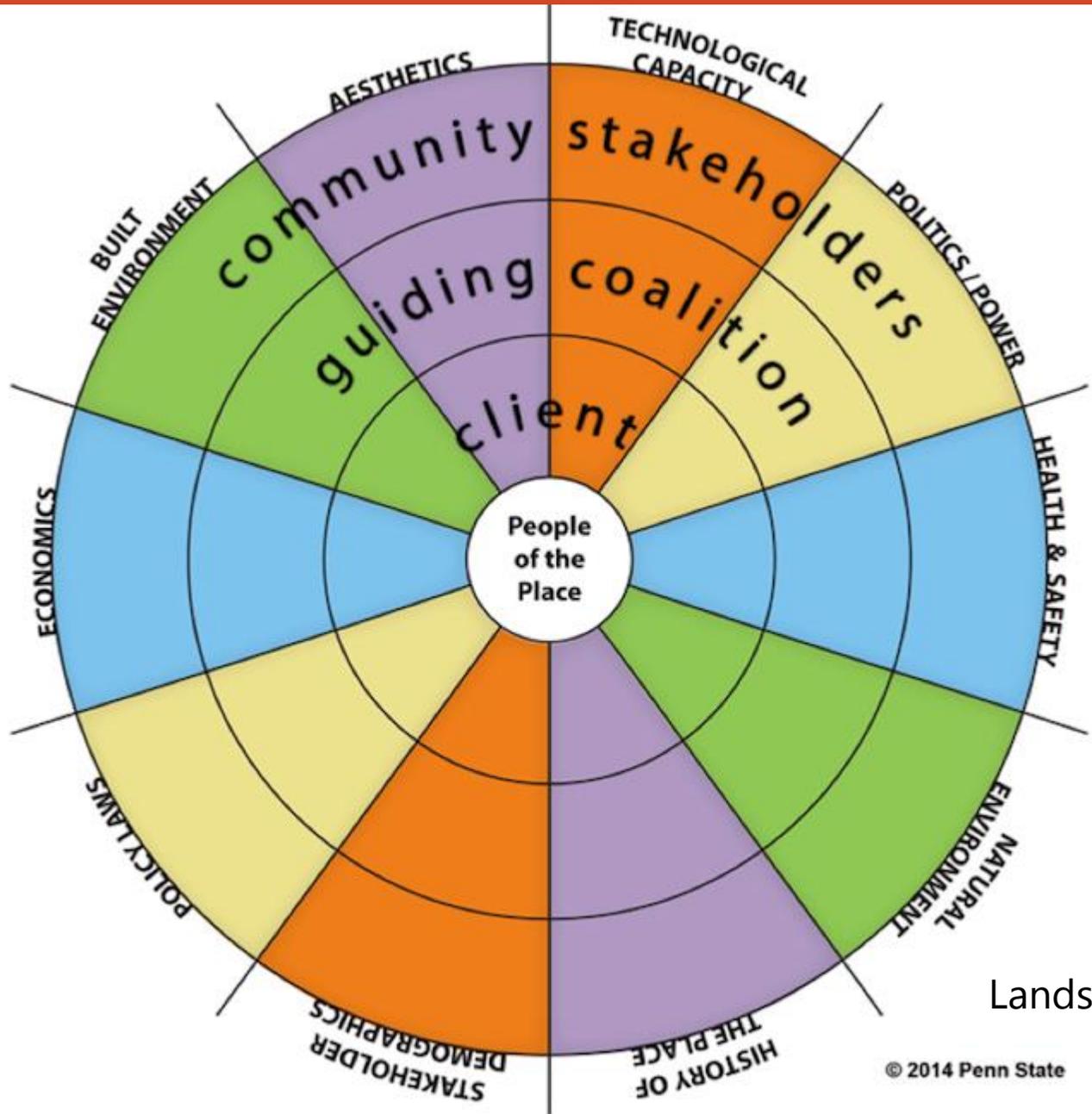
一位哈佛的學者 Carl Steinitz，
三天，
帶領30位產官學界的代表，
以空總再利用為議題展開探討，
完成180張草圖，
仔細看看，
你將會發現不同以往的可能。

展出地點：空軍總部舊址聯合餐廳二樓
(台北市大安區仁愛路三段55號)

展出時間：3/30(日)-4/30(三)
9:00-17:00 每周一休館

主辦單位：台北市都市更新處 承辦單位：中華民國景觀學會 聯絡電話：02-23275688#137林小姐



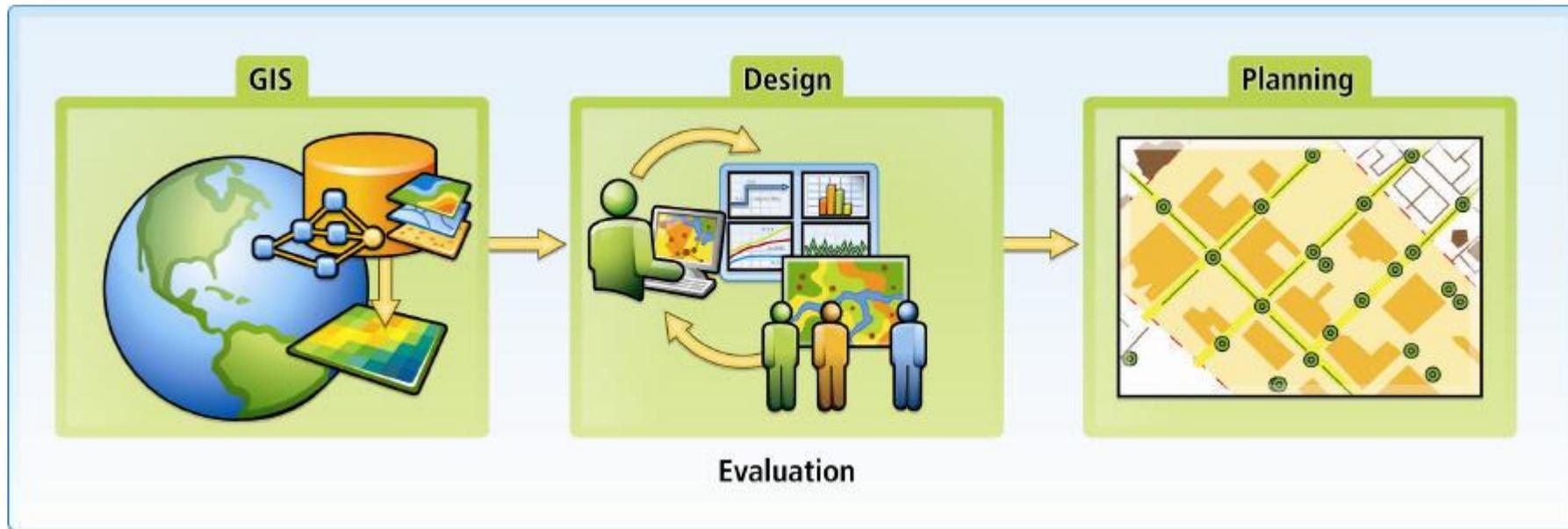


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Landscape Architects Must Lead Geodesign: Here's How

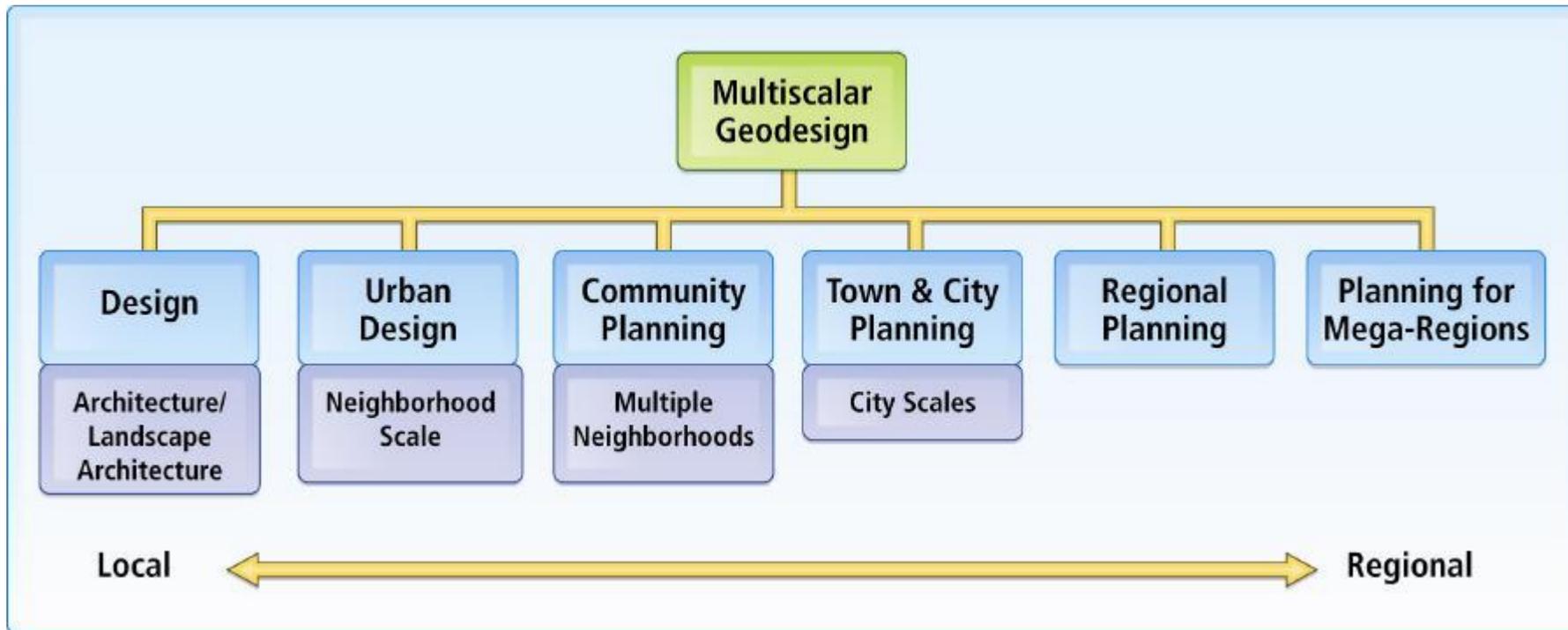
<http://land8.com/profiles/blogs/landscape-architects-must-lead-geodesign-here-s-how>

Geodesign簡介



Geodesign Gathers Momentum
Two-Day GeoDesign Summit Focuses on Geodesign
Technologies and Practices

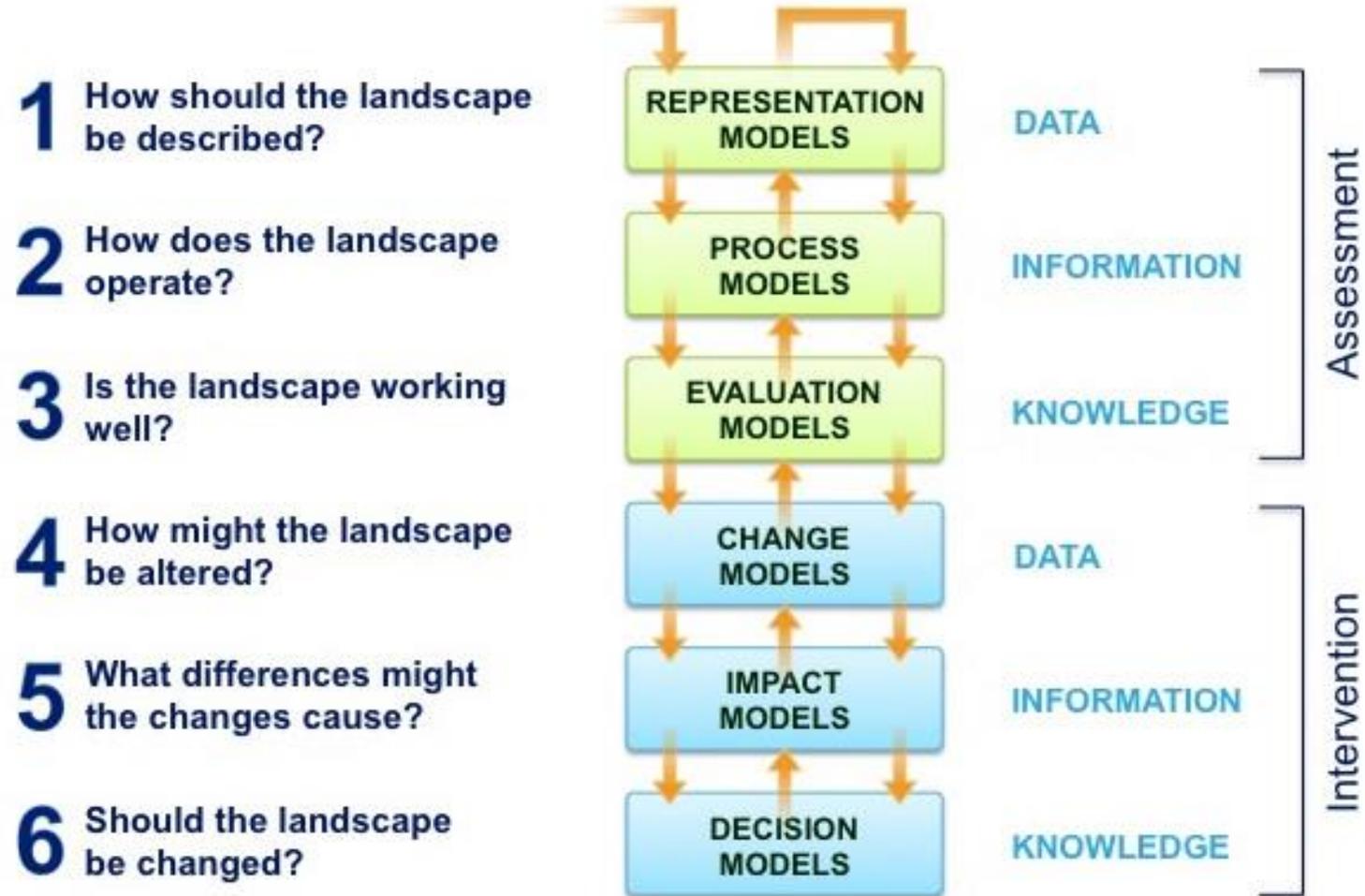
<http://www.esri.com/news/arcwatch/0212/geodesign-gathers-momentum.html>



Geodesign Gathers Momentum
Two-Day GeoDesign Summit Focuses on Geodesign
Technologies and Practices

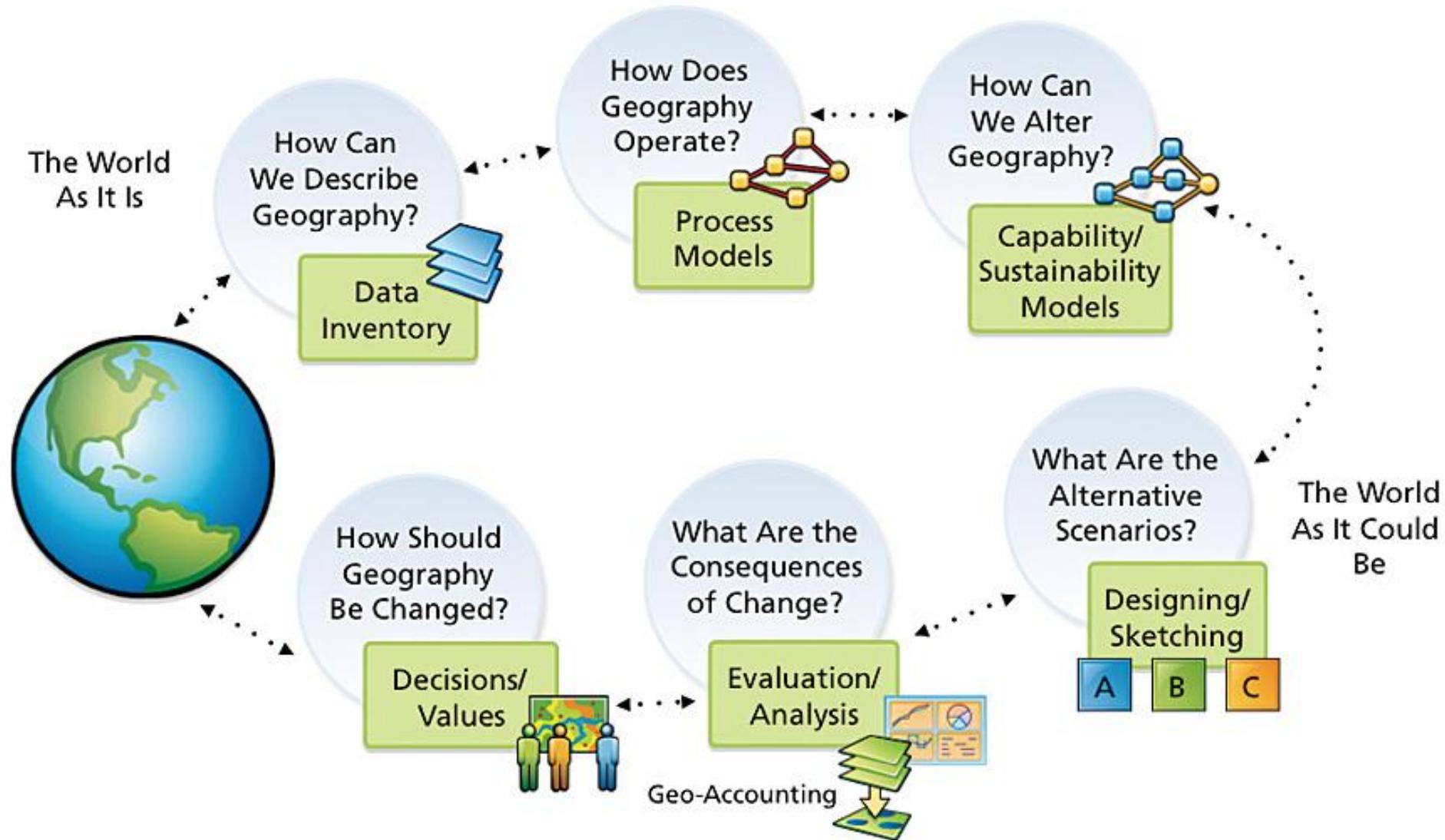
<http://www.esri.com/news/arcwatch/0212/geodesign-gathers-momentum.html>

The geodesign framework – by Carl Steinitz



Geodesign Gathers Momentum
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Geodesign簡介



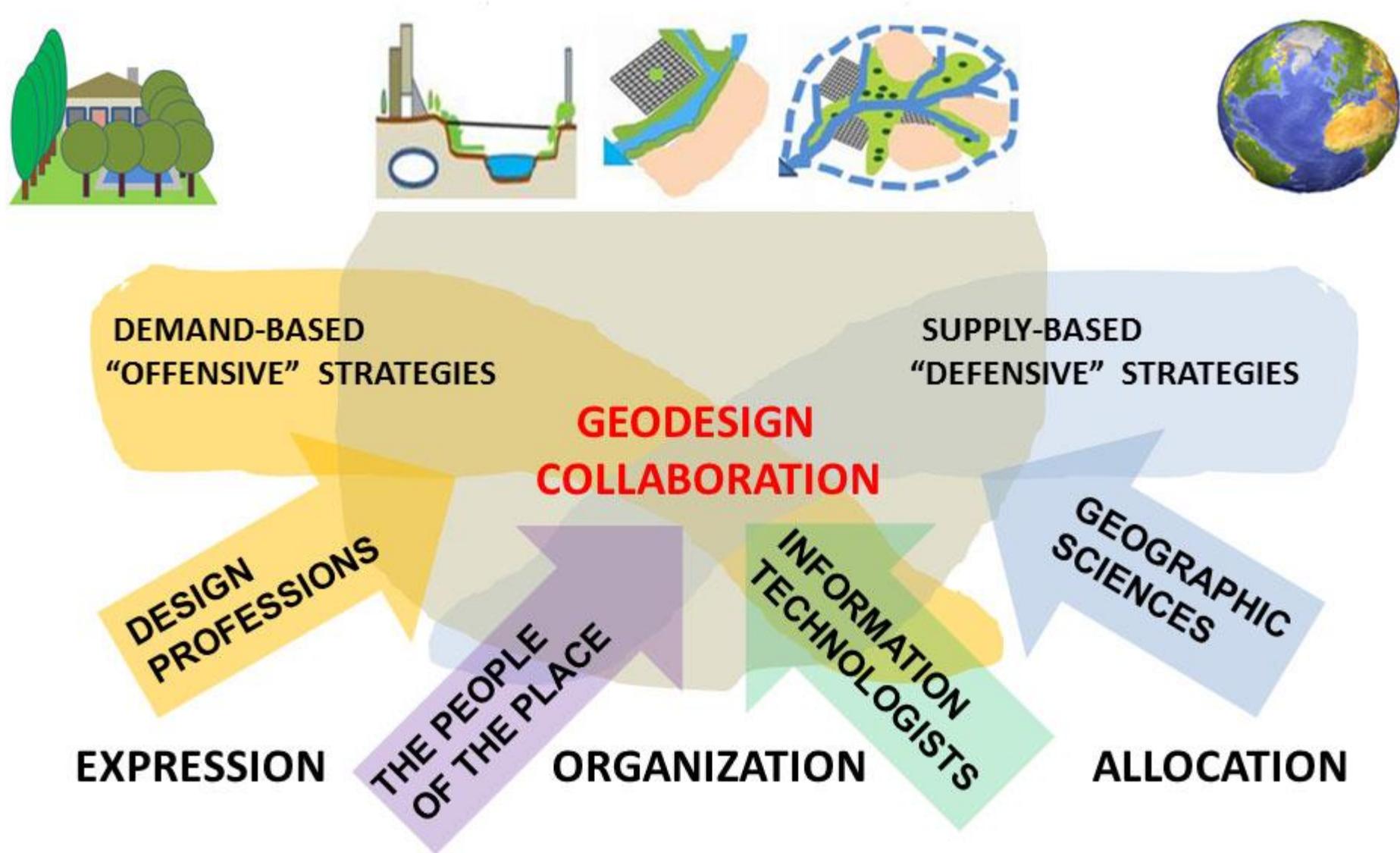
Geodesign簡介



Making Smart Growth Smarter with GeoDesign

<http://www.directionsmag.com/articles/making-smart-growth-smarter-with-geodesign/122336>

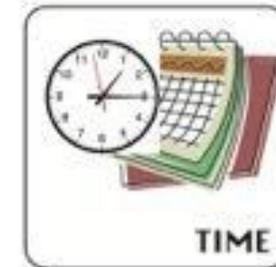
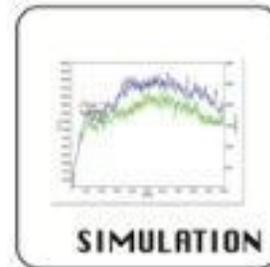
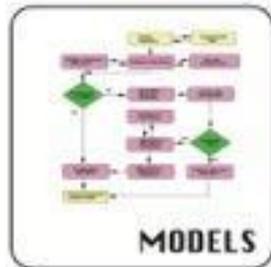
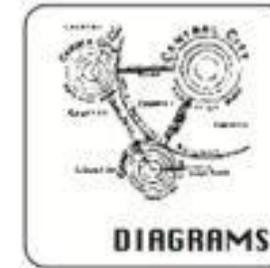
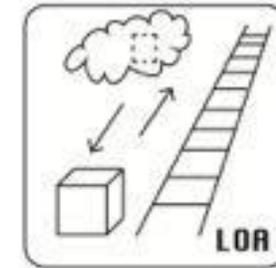
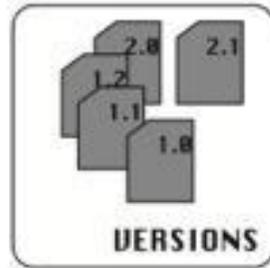
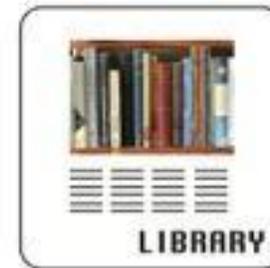
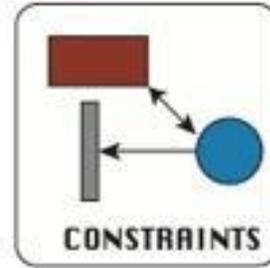
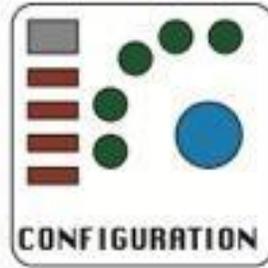
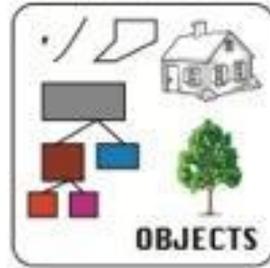
This is where I think collaboration in geodesign can be most significant.



GSD Talks: Carl Steinitz "A Framework for Geodesign"

<http://www.gsd.harvard.edu/#/events/gsd-talks-carl-steinitz.html>

GEODESIGN SYSTEM : TOOLS & HELPERS



Geodesign的發展現況

Spatial Concepts in GIS and Design

[Agenda](#) | [Accommodations & Travel](#) | [Participant List, Position Papers, and Presentations](#)

► Specialist Meeting on Spatial Concepts in GIS and Design, December 15-16, 2008

The idea for this specialist meeting originates in discussions over the potential of integrating design more fully into GIS, and over the development of curriculum in spatial thinking. The central question might be posed as "To what extent are the fundamental spatial concepts that lie behind GIS relevant in design?" or "To what extent can the fundamental spatial concepts of design be addressed with GIS?" or perhaps "Is it possible to devise a curriculum designed to develop spatial thinking in both GIS and design?" The meeting of about 30 people will be held at the Upham Hotel in downtown Santa Barbara Monday and Tuesday December 15-16, and will include a small number of context-setting presentations and ample time for discussion.

This is one of a long series of specialist meetings organized at the Upham Hotel over the past two decades, and will follow a pattern that has been found to work well. It will combine a small number of context-setting presentations with ample time for discussion in plenary sessions, small groups, and informal social gatherings.

2010 GeoDesign Summit

Grid View List View

Sort by: ▲ Order Viewed Liked Discussed Title Date Published



1 Jack Dangermond's Welcome Remarks for the 2010 GeoDesign Summit

Esri president Jack Dangermond shares his vision for the 2010 GeoDesign Summit.

Added: Aug 25th, 2010. Recorded: Jan 6th, 2010. 15377 views.



2 The What and Why of GeoDesign

Tom Fisher, Dean, College of Design, University of Minnesota, introduces GeoDesign and discusses the types of problems GeoDesign can help solve at the 2010 GeoDesign Summit.

Added: Aug 25th, 2010. Recorded: Jan 5th, 2010. 37824 views, 2 like this.



3 GeoDesign in Conservation Planning: Stakeholder Driven Geoprocessing through Greenprinting

Will Rogers, President, the Trust for Public Lands, presents "GeoDesign in Conservation Planning: Stakeholder Driven Geoprocessing through Greenprinting" at the 2010 GeoDesign Summit.

Added: Aug 25th, 2010. Recorded: Jan 5th, 2010. 39241 views.



4 Spatial By Design: Understanding the Special Role of GIS

Michael Goodchild, Professor of Geography, University of California, Santa Barbara, presents "Spatial by Design: Understanding the Special Role of GIS" at the 2010 GeoDesign Summit.

Geodesign的發展現況



Transcript

00:03 Thank you, Chris.

00:05 Japanese masters would spend just all hours of the day and days of the seasons and years...

00:11 ...looking at a particular site to be able to develop something beautiful like this.

00:16 And they did a wonderful job.

00:18 Don't you agree?

Auto Scroll (on)

Jack Dangermond Talks about GeoDesign at TED2010

Esri president Jack Dangermond spoke at TED2010 about GeoDesign, a concept which enables architects, urban planners, and others to harness the power of GIS to design with nature and geography in mind. Video courtesy TED.

Recorded: Feb 11th, 2010 Runtime: 03:45 Night Mode (Off)

Views: 26032 Published: Oct 20th, 2010 HTML5 Video (Off)

7 people like this video.

[Download Video](#) [<Embed>](#)

Tags: GeoDesign GIS Jack Dangermond TED TED2010

TED (Technology, Entertainment, Design)

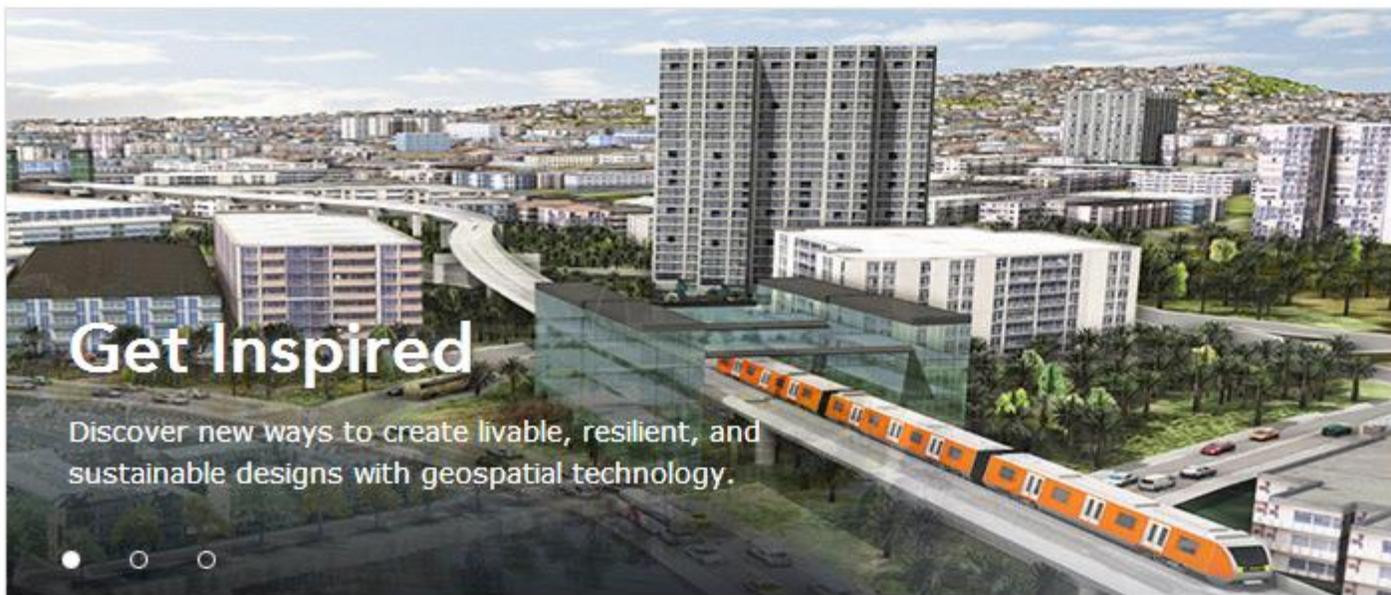
Geodesign的發展現況

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Save the Date in 2015!

Join us for the 2015 Geodesign Summit, January 22-23. In 2014 we focused on using Geodesign in a variety of applications from city planning to disaster response to building beautiful and better functioning landscapes and infrastructure. Next year, we hope to hear from you and discover how you're making a difference in your community with Geodesign.

Watch the 2014 videos [here](#).

January 22–23, 2015
Esri Headquarters,
Redlands, California

Quick Links

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- [Directions and Local Attractions](#)



[Learn More](#) about
Geodesign Projects that are
Making an Impact



Geodesign for Resiliency

Architects, designers, geographers, and city planners face new challenges as our world continues to change in unprecedented ways. Natural disasters can occur in areas historically devoid of them, and rapidly increasing urban populations create new challenges for distributing resources and serving the citizenship. The Geodesign Summit Europe will explore how geodesign professionals can incorporate GIS into their discipline to build safer, smarter, and more resilient communities.

September 11-12, 2014
Delft, Netherlands

Delft University of Technology,
Faculty of Architecture and
Science Center

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- 土人设计睢宁水月禅寺颜覆寺院建筑传统
- 昆明滇池水系绿道
- 土人设计完成西雅图庆喜公园设计方案“城市戏台”
- 六盘水水城河及明湖湿地
- 迁安三里河生态廊道

学术快报

2014World in Denmark国际会议：遇见北欧——开放空间设计与规划的旅行想法

报告人：俞孔坚等

主题：遇见北欧：开放空间设计与规划的旅行想法

时间：2014年6月12日-14日

地点：丹麦哥本哈根

主办：The Research Group of Landscape Architecture and -Urbanism Department of Geosciences and Natural Resource Management University of Copenhagen Rolighedsvvej 23 DK 1958 Frederiksberg www.ign.ku.dk

哥本哈根“中国馆”系列演讲



lacreekfreak：俞孔坚的“与洪水为友”

2007—2014年俞孔坚博士全球巡讲：《设计生态学：俞孔坚的景观》



六盘水水城河及明湖湿地

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最新：俞孔坚——一次景观伦理的心路历程 俞

- Topos：俞孔坚的景观设计学
- 土人设计将为马来西亚设计Terengganu州知识城
- SOM城市设计全球领导团队参观土人设计并于北大举办“携手共建城市”讲座
- 俞孔坚哥本哈根演讲预告：中国城市水问题生态解决方案
- 中关村十大系列评选活动——走进土人设计
- 人民网：土人设计的燕尾洲公园5月21日正式开放

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辽宁公安司法管理干部学院



秦皇岛市委党校



宜春学院高安校区



丹阳天地石刻园



哈利路亚音乐厅



秦皇岛鸟类博物馆



浙江德清县图书馆



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GEO design Shanghai



GEO 简介

about us



GEO design TOKOY 于1989年成立于日本东京。

GEO design shanghai 于2006年7月成立于上海。

二十多年来作为独立的设计公司在竞争激烈的全球市场中驰骋至今，当然有我们作为一个日本企业的独特之处。

GEO design的强项在于

1. 市场规划

2. 掌握日本企业的设计导向：

通用设计

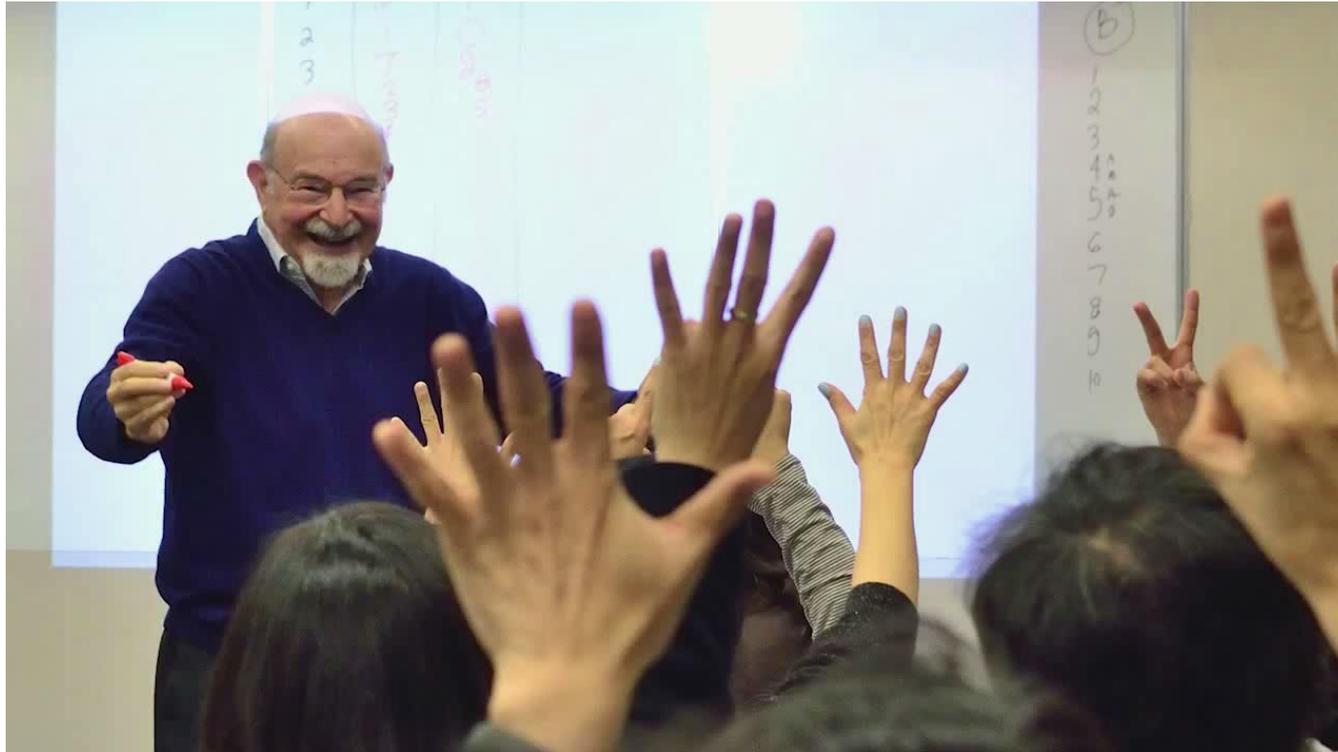
商业设计

环保节能设计

健康设计

.....

Geodesign與城市規劃



Geo-design Workshop

開幕茶會
3/30(日)
14:00-15:30

展出地點：空軍總部舊址聯合製圖二樓
(台北市大同區大馬路100號)

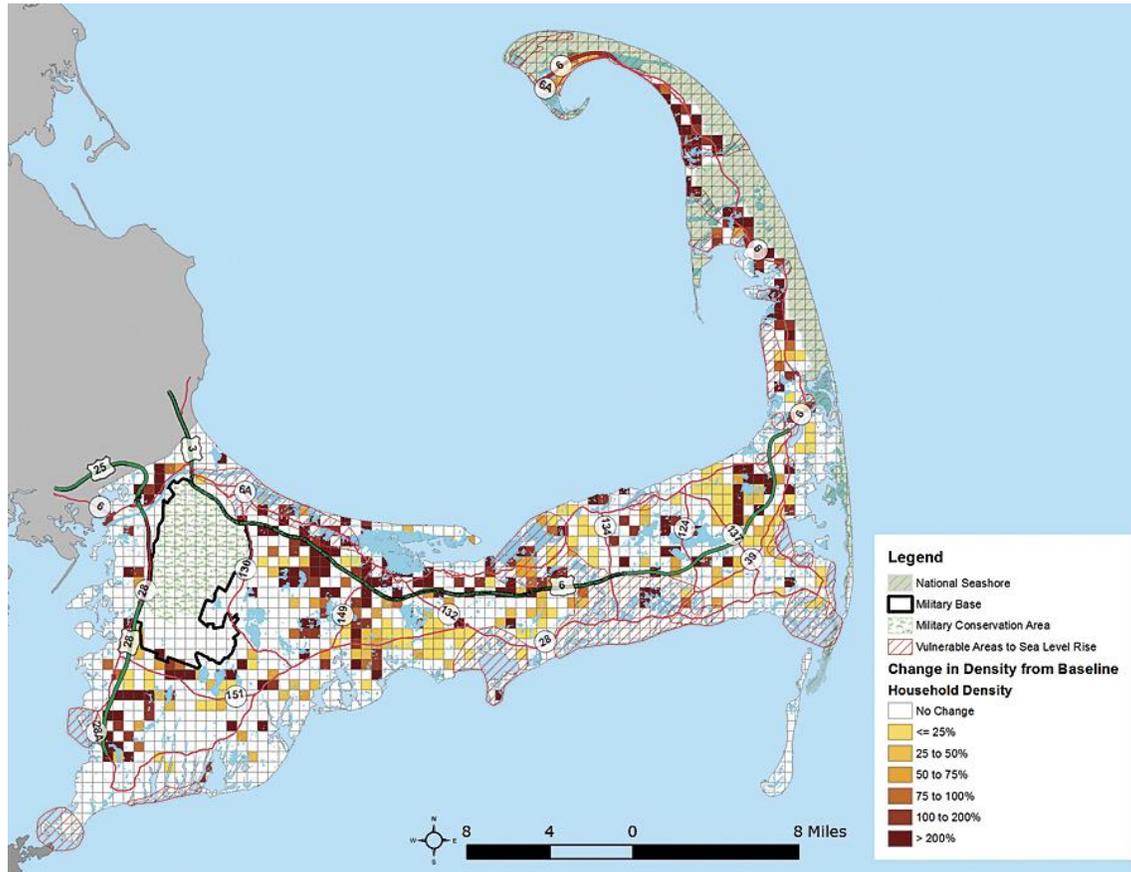
展出時間：3/30(日)-4/30(三)
9:00-17:00 每周一休館

空軍總部舊址

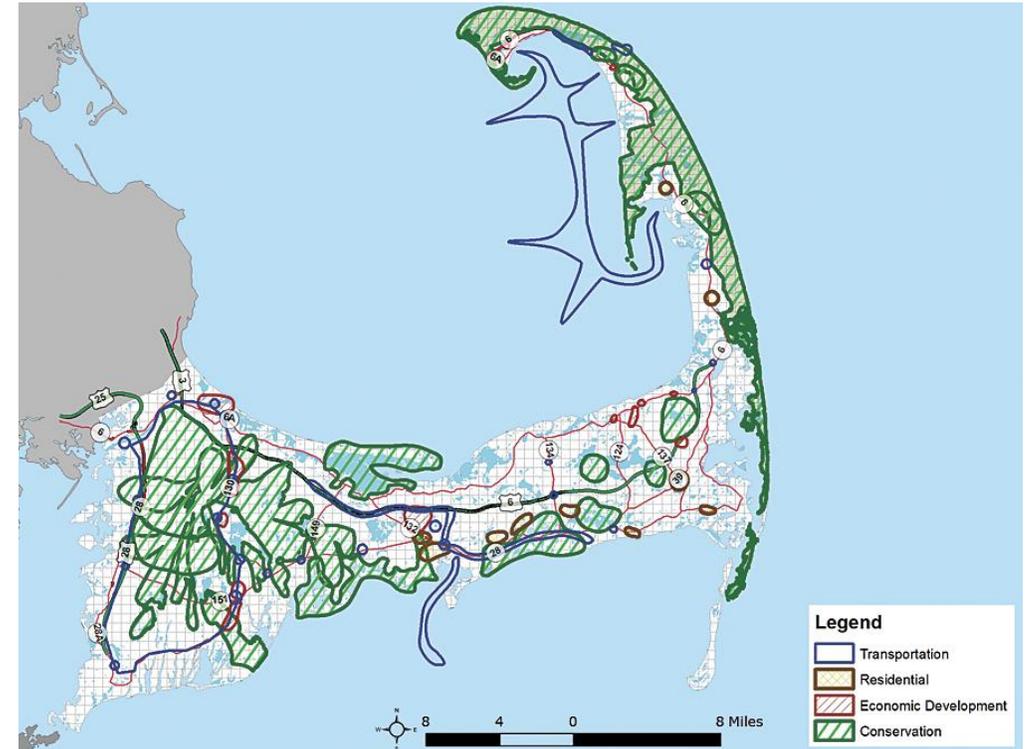
- 第一場：開幕茶會 - 3/30(日) 14:00-15:30
- 第二場：Geo-design 工作坊 - 3/30(日) 16:00-18:00
- 第三場：Geo-design 工作坊 - 3/31(日) 9:00-17:00
- 第四場：Geo-design 工作坊 - 4/1(日) 9:00-17:00
- 第五場：Geo-design 工作坊 - 4/2(日) 9:00-17:00
- 第六場：Geo-design 工作坊 - 4/3(日) 9:00-17:00
- 第七場：Geo-design 工作坊 - 4/4(日) 9:00-17:00
- 第八場：Geo-design 工作坊 - 4/5(日) 9:00-17:00
- 第九場：Geo-design 工作坊 - 4/6(日) 9:00-17:00
- 第十場：Geo-design 工作坊 - 4/7(日) 9:00-17:00
- 第十一場：Geo-design 工作坊 - 4/8(日) 9:00-17:00
- 第十二場：Geo-design 工作坊 - 4/9(日) 9:00-17:00
- 第十三場：Geo-design 工作坊 - 4/10(日) 9:00-17:00
- 第十四場：Geo-design 工作坊 - 4/11(日) 9:00-17:00
- 第十五場：Geo-design 工作坊 - 4/12(日) 9:00-17:00
- 第十六場：Geo-design 工作坊 - 4/13(日) 9:00-17:00
- 第十七場：Geo-design 工作坊 - 4/14(日) 9:00-17:00
- 第十八場：Geo-design 工作坊 - 4/15(日) 9:00-17:00
- 第十九場：Geo-design 工作坊 - 4/16(日) 9:00-17:00
- 第二十場：Geo-design 工作坊 - 4/17(日) 9:00-17:00

— 邀請嘉賓：Carl Spector (USC)
— 邀請嘉賓：MEDICAL CITY - 醫療城市聯合製圖二樓
— 主辦單位：空軍總部舊址聯合製圖二樓
— 協辦單位：空軍總部舊址聯合製圖二樓

Geodesign與城市規劃



The population change map demonstrates what a dispersed pattern of growth might look like



A composite map created using existing GIS layers and sketched additions.

Climate Change Scenario Planning for Cape Cod
A Collaborative Exercise in GeoDesign
<http://www.esri.com/news/arcnews/fall11articles/climate-change-scenario-planning-for-cape-cod.html>



Figure 1.8: A four-lane boulevard. (Image by Esri)



Figure 1.9: A four-lane boulevard with traffic calming features. (Image by Esri)



Figure 1.10: A four-lane boulevard with traffic calming feature and bioswale for a median. (Image by Esri)

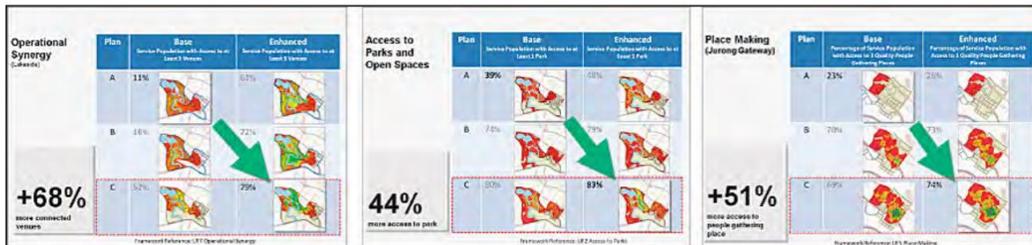
Geodesign allows designers to do their creative design work while receiving near real-time feedback on the probable impacts of those designs.

One of the fundamental characteristics of geodesign is that “design (the process of creating or modifying some aspect of the natural or man-made environment) occurs within the context of geographic space”

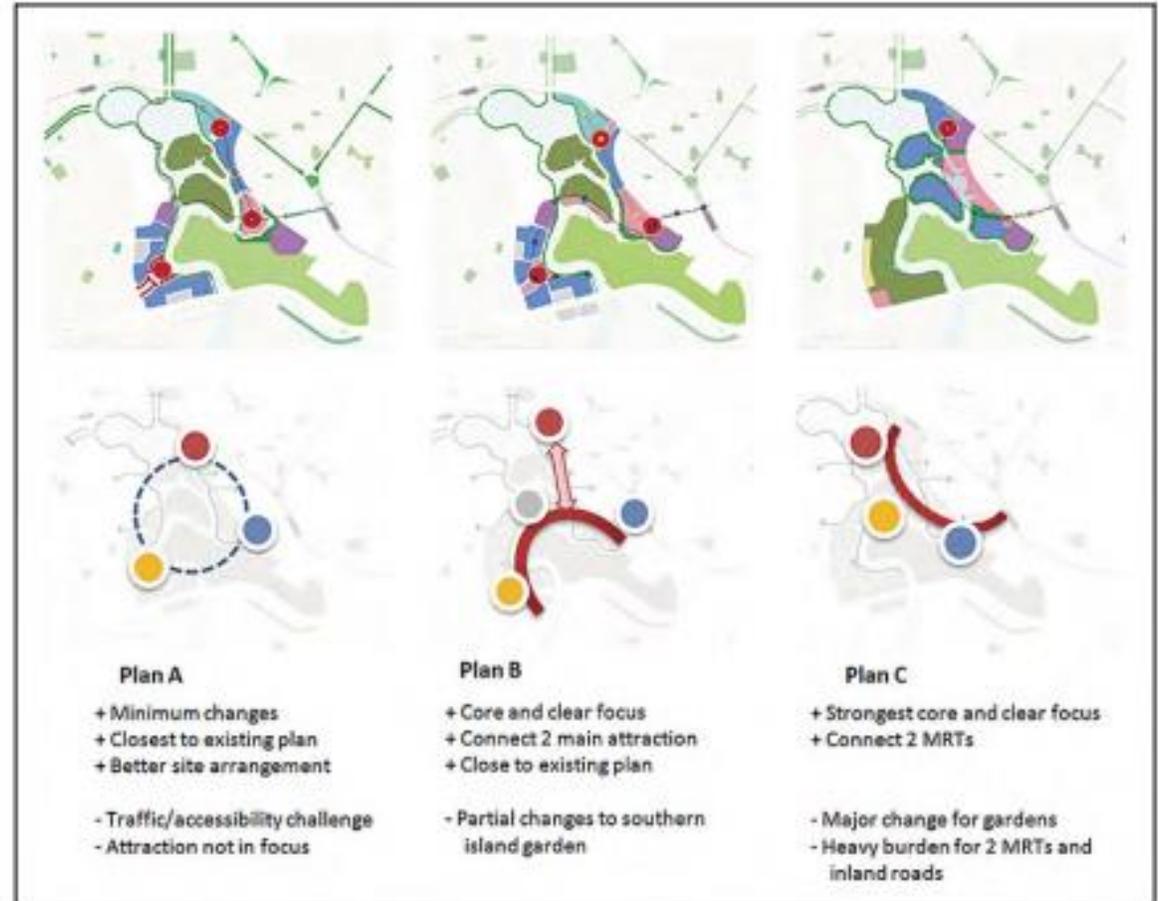
Bill Miller, director of GeoDesign Services at Esri



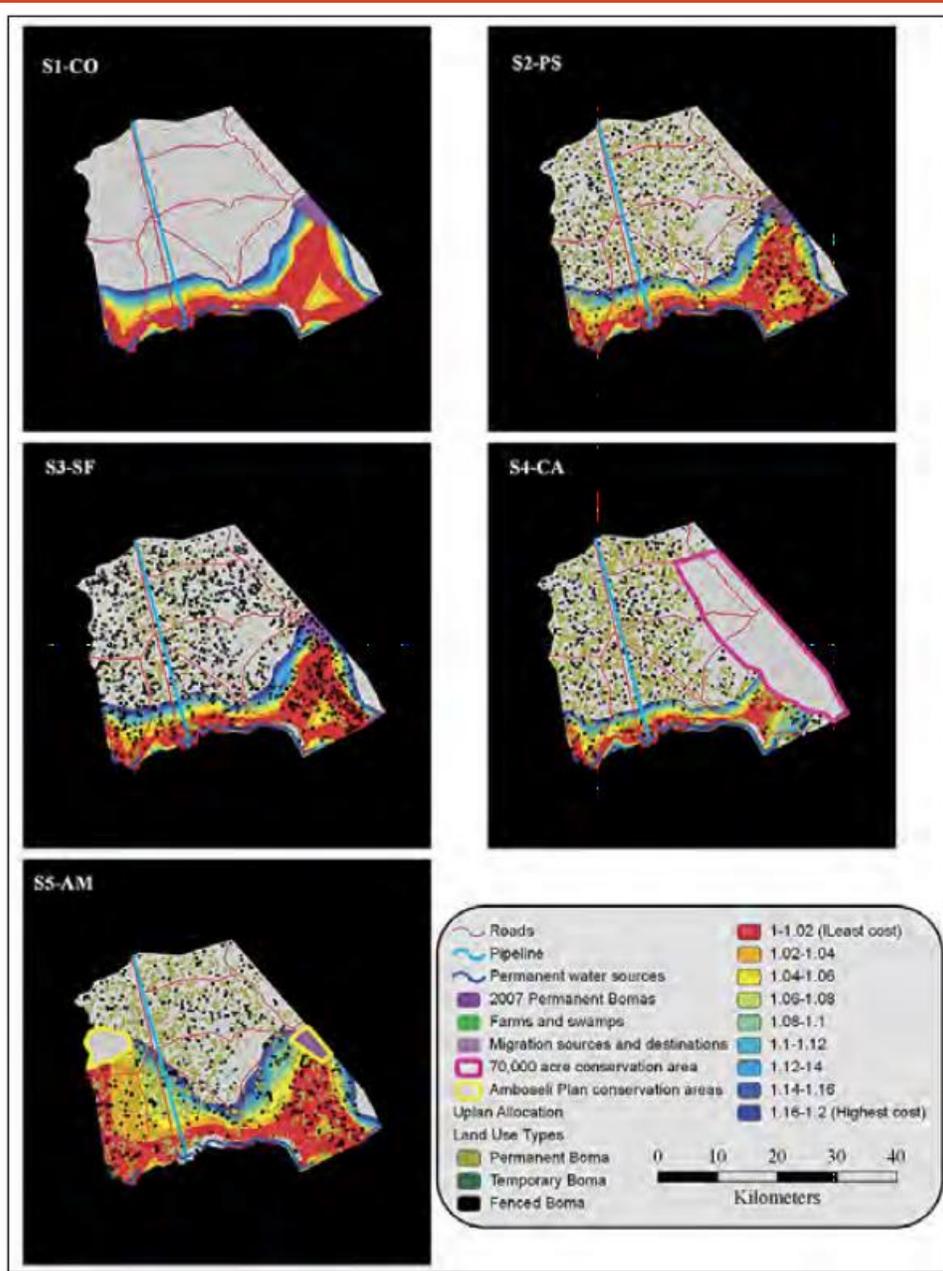
Singapore's business district



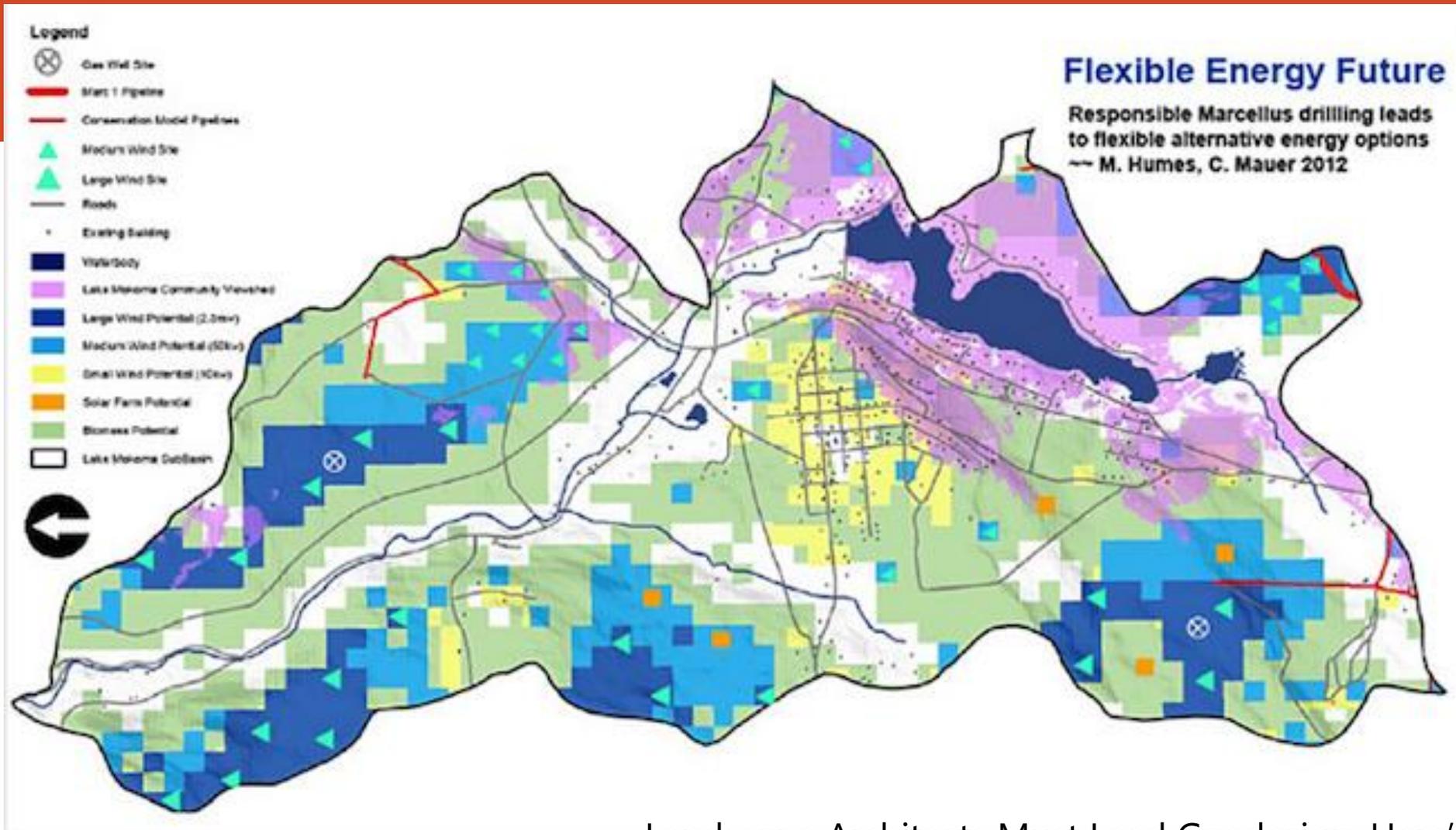
Example of the spatial analyses performed to show the impact of plan changes on different indicators important to the stakeholders.



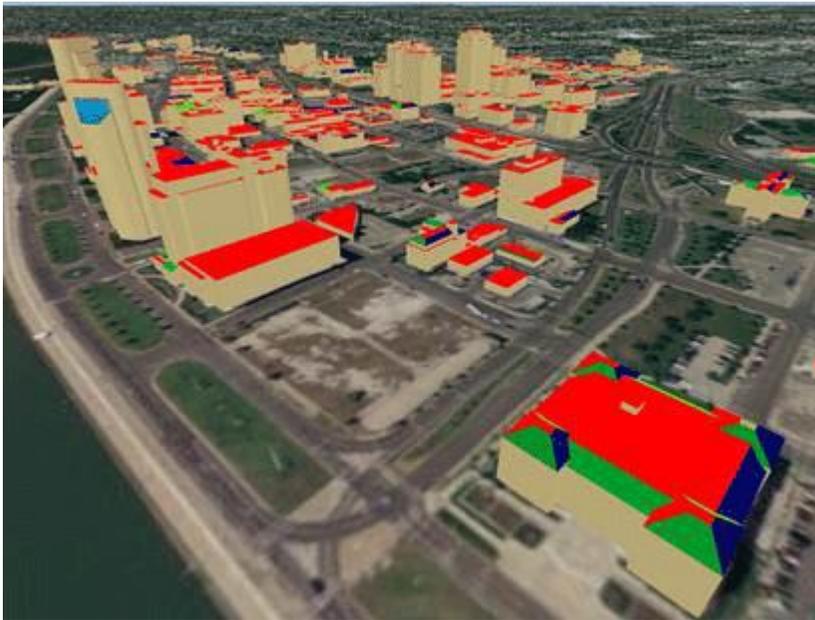
An example of the positive and negative effects of three alternative plans, the last focusing on Singapore's Mass Rapid Transit (MRT)



UPlan's output from five different Mbirikani scenarios, based on past trends, various degrees of fencing, and different management plans involving Mbirikani, will assist researchers and ultimately local ranch members with land subdivision decisions.



Landscape Architects Must Lead Geodesign: Here's How
<http://land8.com/profiles/blogs/landscape-architects-must-lead-geodesign-here-s-how>



3D Corpus Christi Buildings with Solar Roof Values



3D Corpus Christi with FEMA Flood Data Layer

Corpus Christi, Texas Steps into 3D GeoDesign and Emerges a Winner
By geospatialpr.com on September 13, 2012

<http://geospatialpr.com/2012/09/13/corpus-christi-texas-steps-into-3d-geodesign-and-emerges-a-winner/>



Street Design concepts in CityEngine with CyberCity 3D buildings

Suburban Development



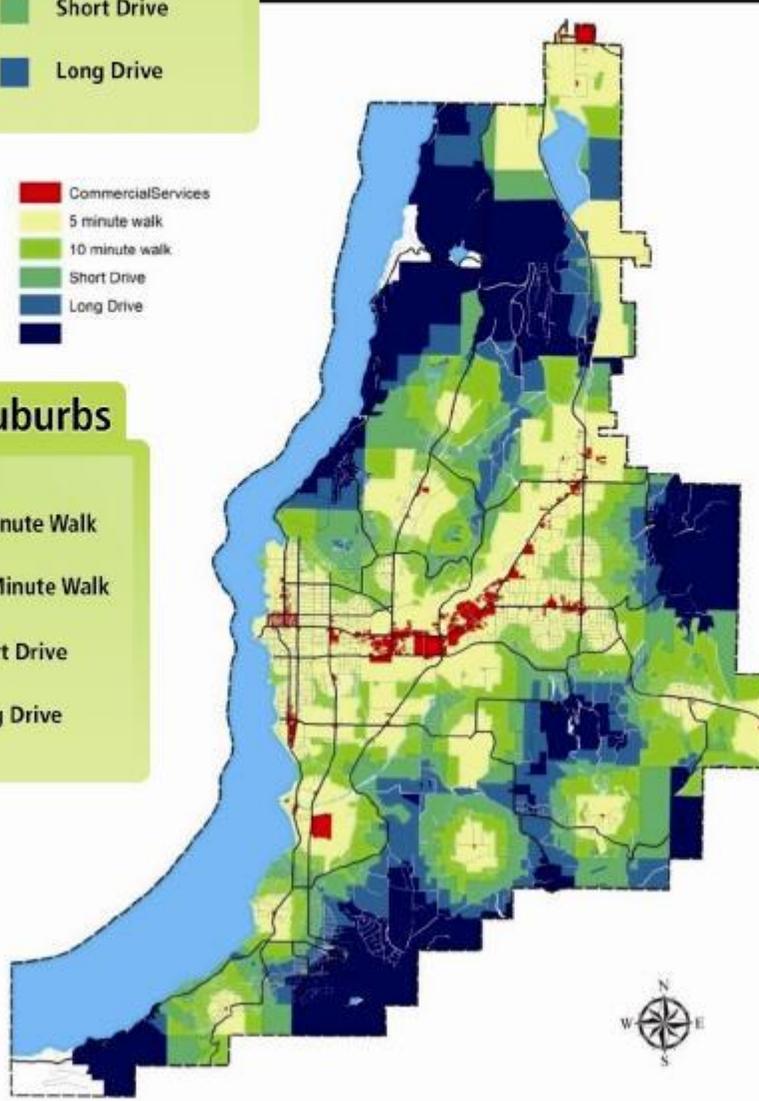
Urban Centers and Suburbs

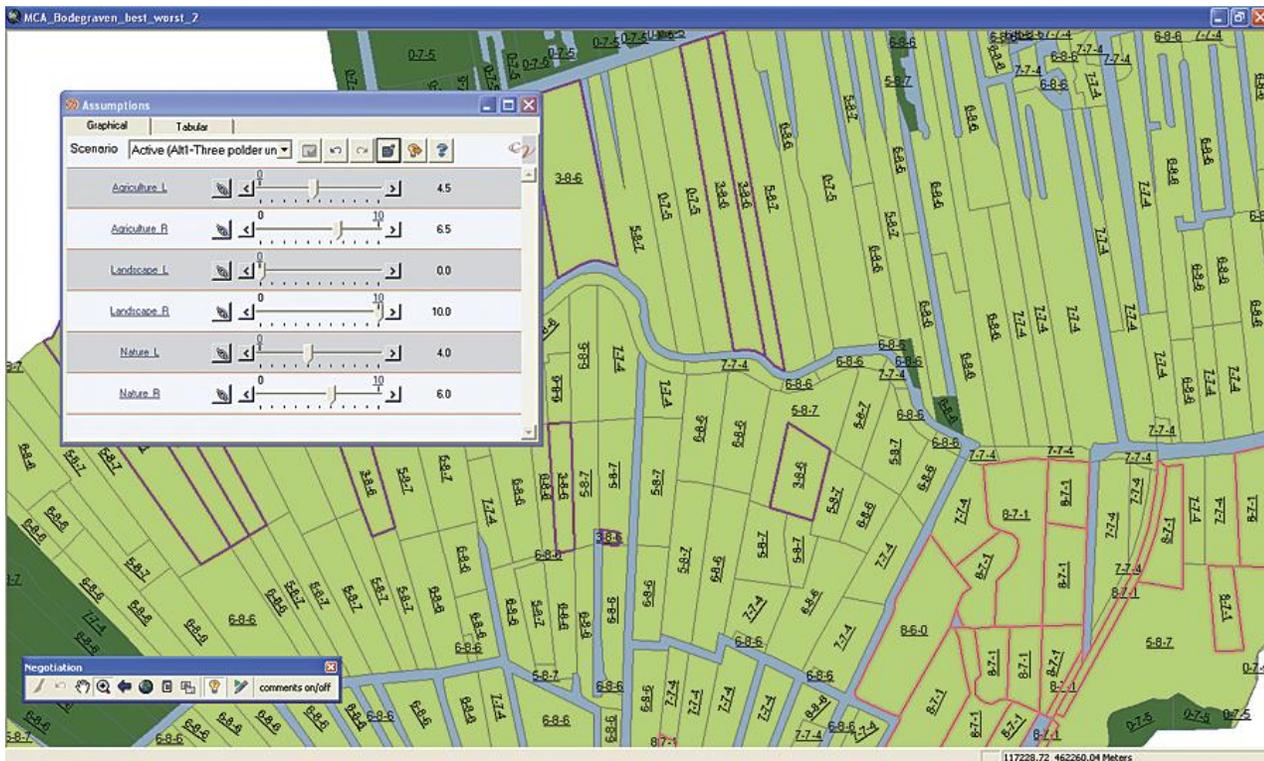


Hubs and Spokes



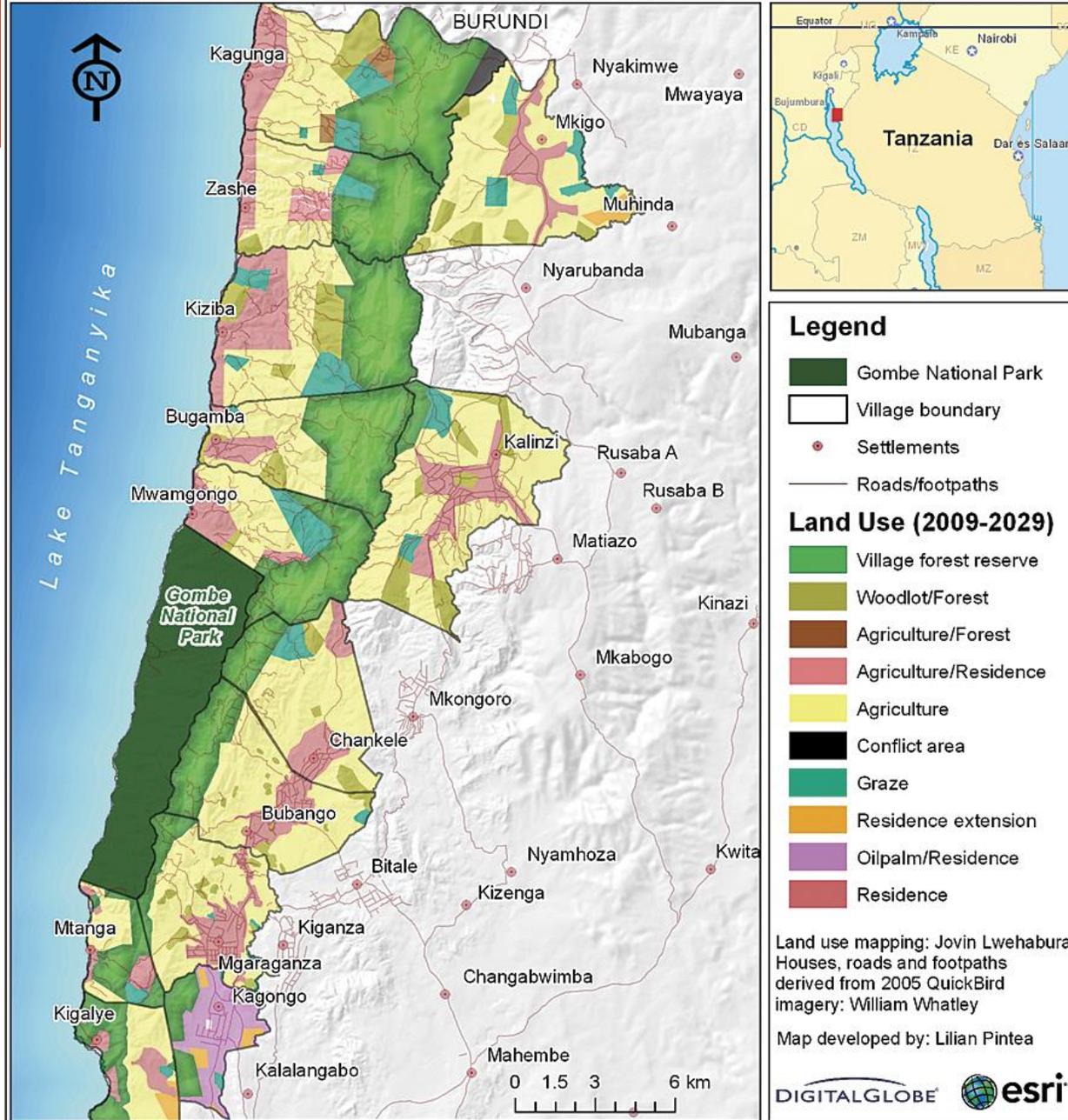
Ultra Compact





A large touch table acted as the main map interface for the project. It facilitated stakeholder participation in the three project workshops.

Quantitative trade-offs of the project were identified by selecting polygons that would profit from a land-use swap



Legend

- Gombe National Park
- Village boundary
- Settlements
- Roads/footpaths

Land Use (2009-2029)

- Village forest reserve
- Woodlot/Forest
- Agriculture/Forest
- Agriculture/Residence
- Agriculture
- Conflict area
- Graze
- Residence extension
- Oilpalm/Residence
- Residence

Land use mapping: Jovin Lwehabura
Houses, roads and footpaths derived from 2005 QuickBird imagery: William Whatley
Map developed by: Lilian Pintea

結語

■現在進行式還是未來式?

■GeoDesign面臨的挑戰

- 資訊協作的可行性
- 符合利益共同體所需的資訊

報告完畢
敬請指教

