# Google Earth based visualisation of Dutch Land Use scenarios : beyond usability

## 3D visualisation of Sustainable Outlook to support policy makers

**Ron van Lammeren, Centre for Geo Information, Wageningen University**
**Joske Houtkamp, Content and Knowledge engineering, University Utrecht**
**Stefan Colijn, Content and Knowledge engineering, University Utrecht**
**Maarten Hilferink, ObjectVision bv**
**Arno Bouwman, Dutch Environmental Assessment Agency**

## How to construct a 3D presentation out of 2D raster data ?

## Will it benefit policy makers ?

| Visualisation | | Average Score | Number of Answers | Variance |
|---|---|---|---|---|
| i | Colour | 4.78 (0.91) | 657 | 1.92 |
| ii | Texture | 4.78 (0.83) | 679 | 2.06 |
| iii | 3D Icon | 5.09 (0.81) | 687 | 1.46 |

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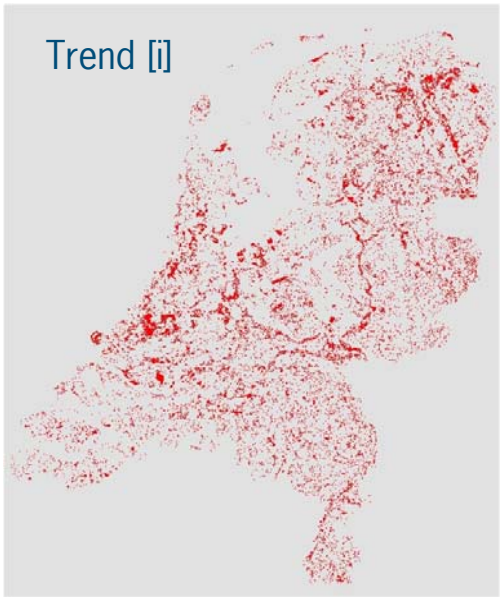
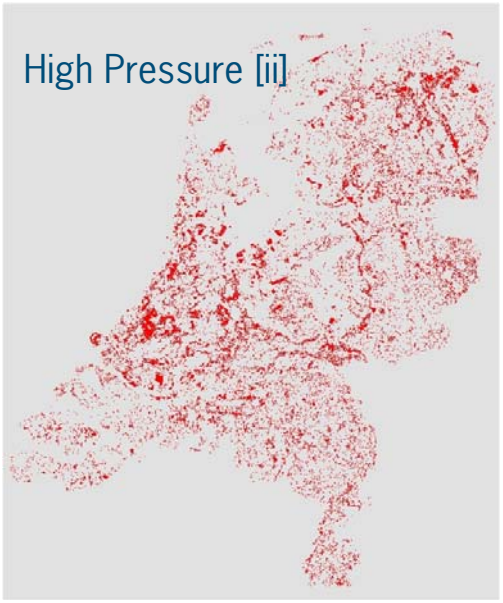
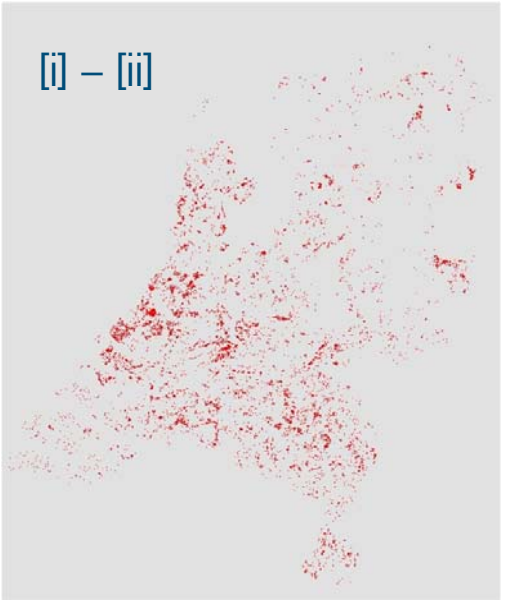
## Dutch Land use Scenarios for 2030



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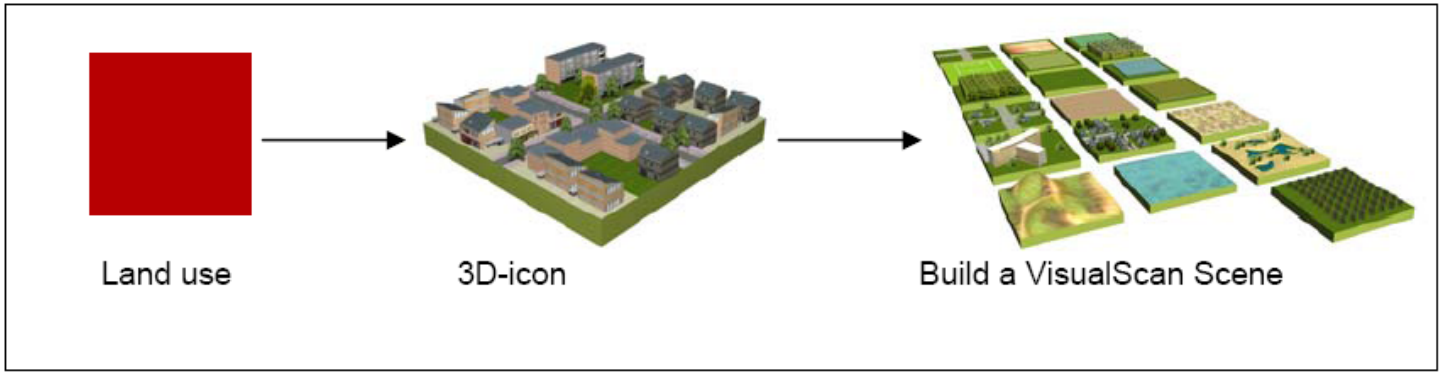
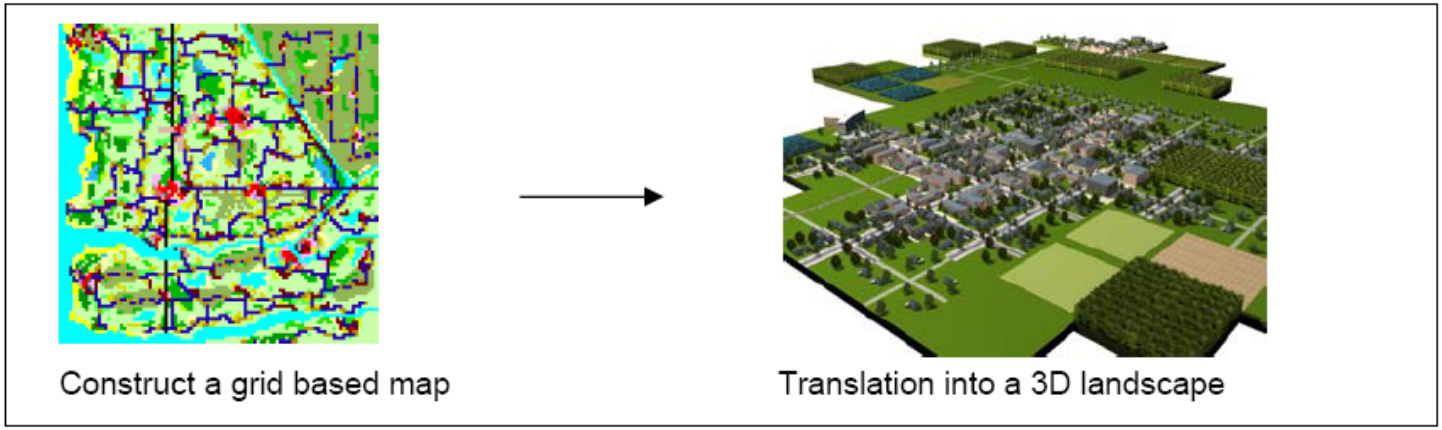
## Visualscan (2005)

***Translation***




***Creating Landscapes***



# Visualisation options

## GeSo (2008)

Current landscape

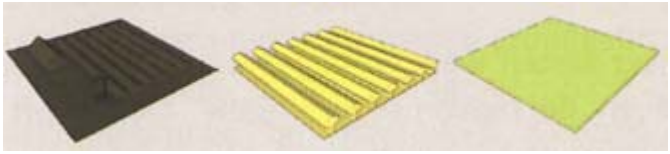
Current land use

Current land use - 3D objects


Future land use - colours

Future land use - textures

Future land use - icons



# Will it benefit policymakers

## Hypotheses (Mahjdoubi, 2001)

| | IF | THEN |
|---|---|---|
| I | more information | less mistakes during the assessment of land use distribution |
| II | more information | less time to assess land use distribution |
| III | more realistic | improves experiences and persuasiveness |
| IV | more realistic | improves appreciation |
| V | textures | works faster and more correct then colours and icons |

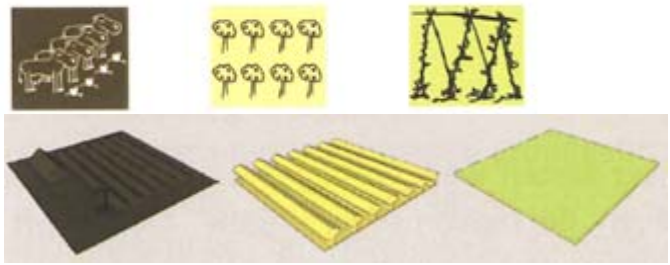
# Will it benefit policymakers

## Experimental setting

**Condition 1: colours**

**Condition 2: textures**

**Condition 3: icons**



**Test group 45 persons – average age 32.5 ( sd: 11.4)**

**4 activities**

**- Personal questions (8): age, experiences, domain of study/work**

**- Tasks (4*4): to explore and to compare**

**- Usability test (44): efficiency, understanding**

**- Experience test (7*8): environmental quality assessment | not to be answered**

# Will it benefit policymakers

## Hypotheses rejected - accepted

| | IF | THEN | |
|---|---|---|---|
| I | more information | less mistakes during the assessment of land use distribution | |
| | | no significant differences | colours score slightly better |
| II | more information | less time to assess land use distribution | |
| | | no significant differences | textures score slightly better |
| III | more realistic | improves experiences and persuasiveness | |
| | | differences, but not significant | 3D icons score better |
| IV | more realistic | improves appreciation | |
| | | significant differences | 3D icons score better |
| V | textures | works faster and more correct then colours and icons | |
| | | no significant differences | textures score slightly better |

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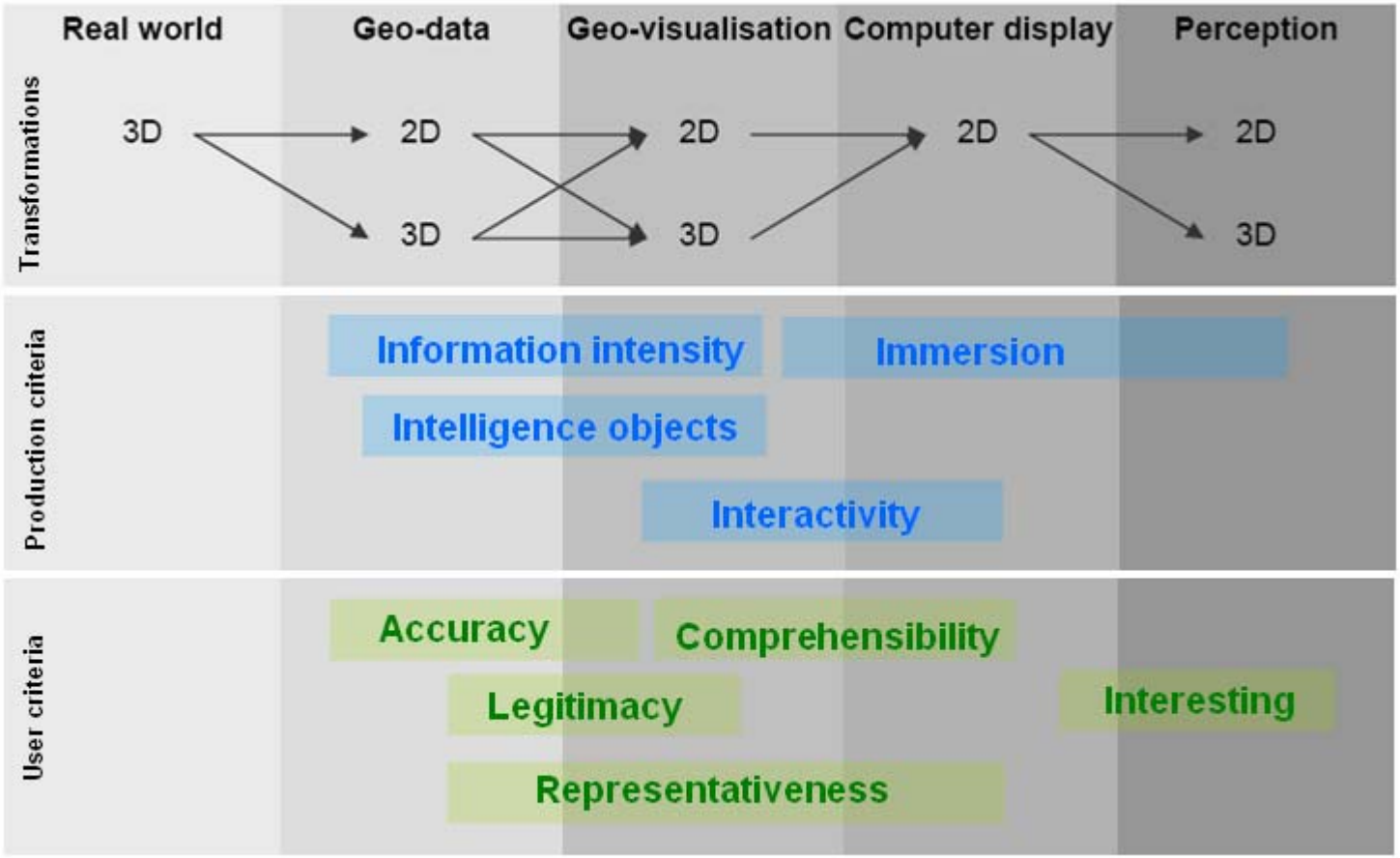
contact: ron.vanlammeren@wur.nl

# When to use what 3D visualisation?

References : Brink et al, 2007, Sheppard et al, 2008; Koekoek et al, 2009 - in prep



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## GeSo (2008)