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Sivandesign
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Sivan Design
Corporate Overview

Founded	▪ Founded in 1999 (1996) privately held
Core Business	▪ GIS integrated IT turnkey solutions ▪ 3D simulation and visualization software ▪ Large scale mapping ▪ Surveying, mapping and Civil Engineering software
Products and solutions	▪ GeoERP is a GIS based IT solution suite for the management of a country's most viable resources ▪ **3D GIS – 3D GIS web based/iPad Server solution** ▪ CivilCAD 2012 – civil engineering software suite
Worldwide Locations	USA, Israel, Romania, Nigeria, Portugal, India, Belgium, China, Kenya, Ghana, Ethiopia, Uganda, Zambia
Solid Financial Backing	15% Yearly Revenue Growth
Strategic relationships	**esri** Partner Network **Microsoft** CERTIFIED **Autodesk** Authorised Developer Partner **BRICSYS**

2   **Sivan**design

1

Future Initiative
3D GIS

The next generation in Geographic Information System

3D-GIS
3D GIS in the Cloud

3D GIS
Main Purposes

City Planning

3D Cadastre

Upper and underground infrastructure

Highways and roads

3D GIS

Key Features

- Convert data/projects from 2D to 3D in few steps
- Purely web application (3D GIS Studio, and 3D GIS Explorer) with no installation
- Cloud computing approach
- Viewing, Analyzing and Exploring in 3D
- 3D Features
- Support for the most common data formats and Geo-Spatial protocol
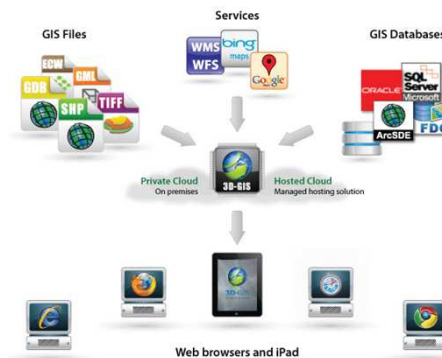- Available for iPad and mobile devices

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3D GIS

Data Sources – Creating the 3D World

- **Terrain** – GeoTiff, DEM or TIN
- **Raster** – GeoTiff, ECW
- **3D Native Models** – Collada, Sketch-Up, KML, Multi-Patch, OBJ
- **Existing GIS data from**
  - Shapefiles
  - FileGDB
  - ArcSDE
  - ORACLE Spatial
  - SQL Server Spatial
  - Web Map Services

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3D GIS
Application Benefits

| City Planning 3D GIS | Roads 3D GIS | Infrastructure 3D GIS | Cadastre 3D GIS |

- ✓ Development control
- ✓ Web enabled for planning consent
- ✓ Design implications
- ✓ Animation

- ✓ Faster decision making
- ✓ Landscape integration
- ✓ Work efficiency and quality assurance
- ✓ Infrastructure Coordination
- ✓ Safety audits

- ✓ Underground Infrastructure Coordination
- ✓ Traffic arrangements

- ✓ Spatial Parcels and Sub Parcels
- ✓ 3D boundary buffers
- ✓ Underground expropriation
- ✓ Level based topological rules

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7
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City Planning 3D GIS
Main Advantages

- **Development control through 3D Visualization** –
  - Existing Vs. Design test-case scenarios
  - Billboards and Masts
  - Skyline effects
- **Web Enabled** –
  - Support local governments in achieving planning consents with communities and industries
- **Design Implications** –
  - Shadow analysis
  - Line of Sight Analysis
- **Animation** –
  - 3D flythrough animations for various uses such as touring

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Roads 3D GIS
Main Advantages

- **Decision Making Process** –
  - Detailed 3D model of the designated road
  - Real-time information per spatial object (land owner, zoning, etc.)
  - Birds eye view clearer for the non-technical
- **Landscape integration** –
  - Nature environmental costs
  - Querying land culture
- **Infrastructure Coordination** –
  - Road affect on existing infrastructure
  - Maintaining infrastructure safety buffers
- **Safety Audits** –
  - Line-of-sight and visibility region checks
- **Work efficiency –**
  - Automated quality assurance tests
  - Reducing possible human errors

Infrastructure 3D GIS
Main Advantages

- **Underground Infrastructure Coordination** –
  - Avoiding breakdown maintenance
  - Efficient preventive maintenance
  - Collision free planning

- **Design –**
  - 3D Layers inspection
  - Slopes and minimum distances

Cadastre 3D GIS
Main Advantages

- **Upper and Underground Cadastre** –
  - Spatial lot, parcel, and sub-parcel
  - Displacement distances
  - Spatial registration plan

- **3D boundary buffers** – of spatial lots, parcels, and sub-parcels

- **Underground expropriation** – of spatial lots
- **Level based topological rules** – as a result of subterranean space changes

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