GEOSPATIAL INDUSTRY: MOVING UP THE VALUE CHAIN

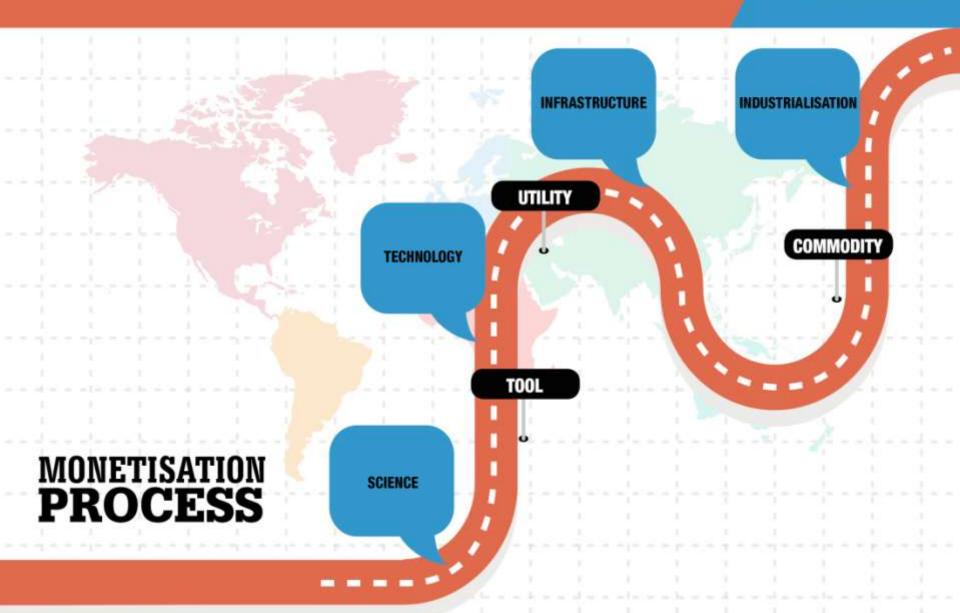
SANJAY KUMAR, CEO Geospatial Media and Communications Pvt. Ltd





EVOLUTION

VISUALISATION TO INDUSTRIALISATION



GEØSPAT

POSITION TO PRECISION

GE SPATIAL

UP TO 10M

UP TO 1M

CENTIMETER LEVEL

MILLIMETER LEVEL



- ☑ Navigation
- ⊔ Land Use
- ☑ Telematics
- **□** Forestry
- ☑ Environment
- ☑ Business Analytics



- **⊠** Mapping
- ⊔ Utilities
- ↘ Transportation
- ⊻ Marine
- ☑ Oil & Gas



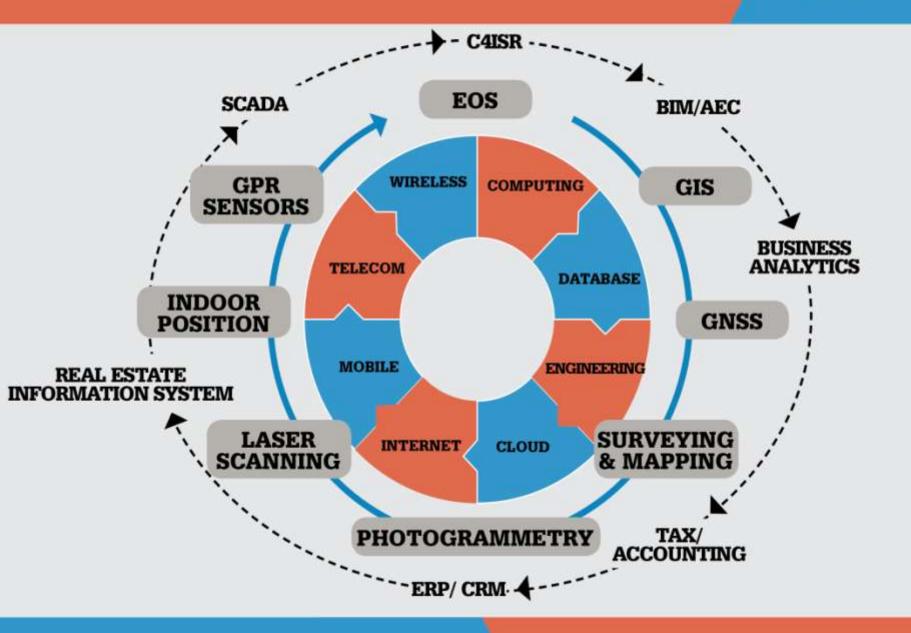
- ⊔ Mining
- □ Archeology
- ☑ Architecture
- ☑ Construction
- **⊔** Land Admin
- □ Indoor Positioning
- ☑ Machine Control



- **∠** Engineering
- ☑ Manufacturing
- ☑ Industrial Workflow
- **⊠** Metrology
- **⊠** Seismology

INDUSTRY ECOSYSTEM



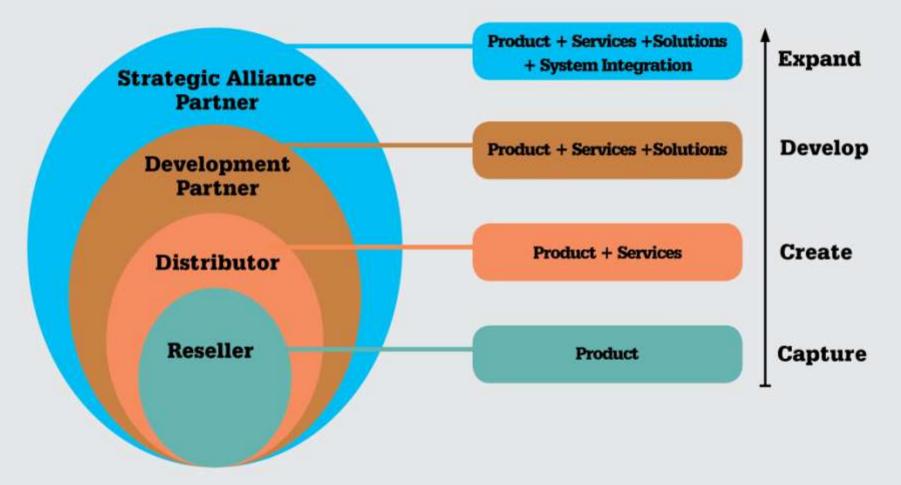




CHANGING MATRIX OF BUISINESS MODEL

EVOLUTION OF INDUSTRY

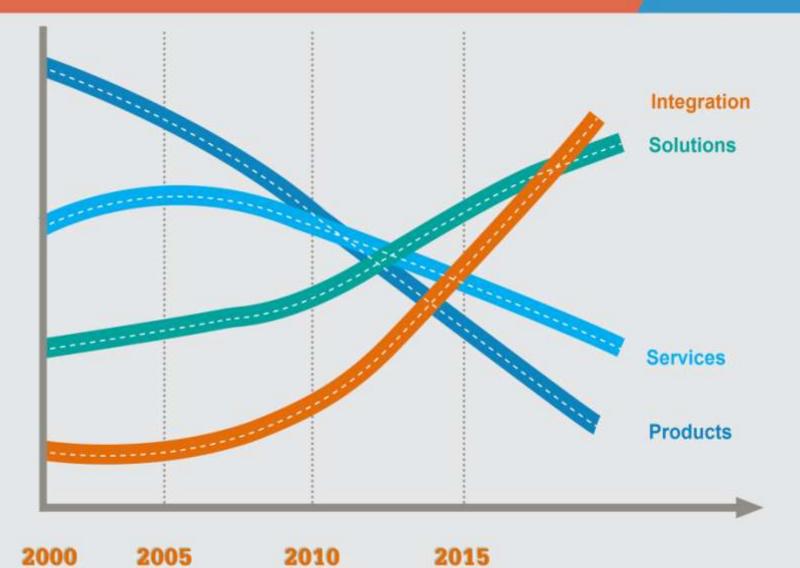




Moving up the value chain

EVOLVING SALES MODEL





PARTNERSHIP MODEL



TOPCON: Sokkia

BENTLEY: elcoSystem + Ivara + InspecTech

TRIMBLE: Info + Ashtech + Spectra + Applanix + Gatewing + Tekla

HEXAGON: Erdas + Leica + Novatel Geomax + Aibotics Intergraph + Distributors in Emerging Markets

TECHNOLOGY ORIENTED/MARKET CONSOLIDATION ACQUISITIONS

HEXAGON: Safe Mine, ILab; Arvus

TOPCON: Wachendorff Electronics; DynaRoad

BENTLEY: Acute3D; C3GLobal

TRIMBLE: Fifth Element; Linear Project; IRON Solutions; Mining Information Systems

SOLUTION ORIENTED ACQUISITIONS BY GEOSPATIAL COMPANIES AMAZON + UPNEXT = 3D Cloud

PITNEY BOWES + MAPINFO = Mailing Business

FACEBOOK + GOWALLA = Social Media

MICROSOFT + VEXCEL = Spatial Dimension

COMPETITIVE ADVANTAGE ACQUISITIONS BY MAINSTREAM COMPANIES

HEXAGON: Esri + Accenture

TOPCON: Autodesk + TORO + Komatsu

BENTLEY: Trimble +

TRIMBLE: Bentley + Caterpillar + John Deere + Vico + IFICON

SOLUTIONS CENTRIC PARTNERSHIPS



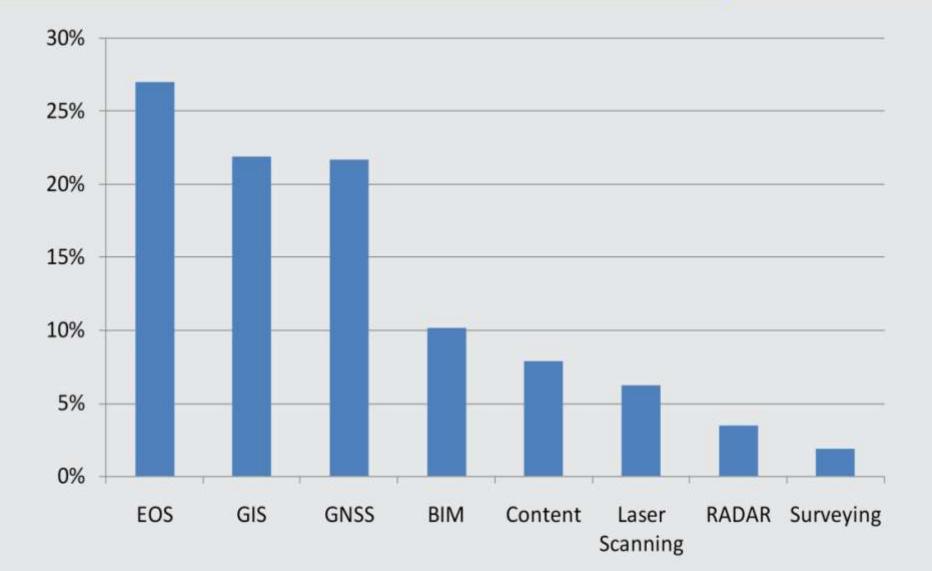
INDUSTRY DIRECTION



INDUSTRY DIRECTION

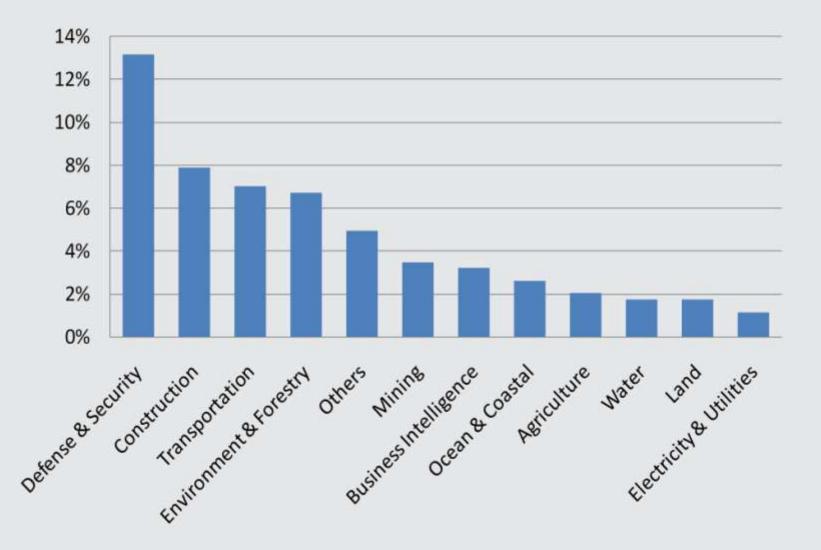
TECHNOLOGY FOOTPRINT OF GEOSPATIAL INDUSTRY



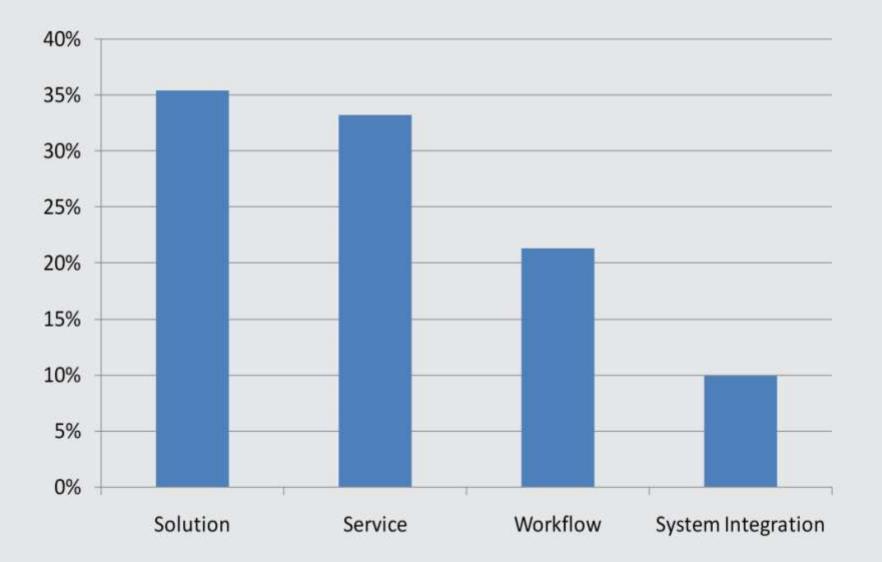


INDUSTRY WISE ADOPTION OF GEOSPATIAL TECHNOLOGY



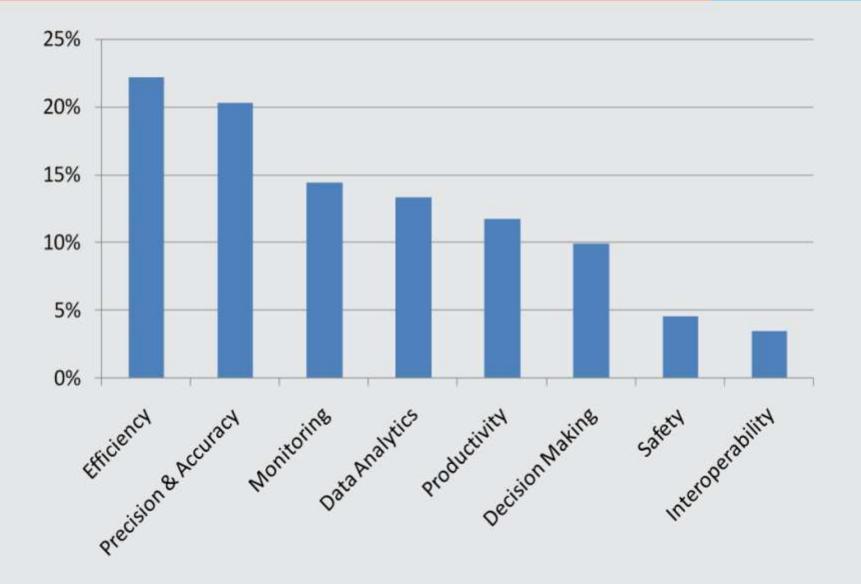


GEOSPATIAL TECHNOLOGY INTEGRATION AND CONVERGENCE



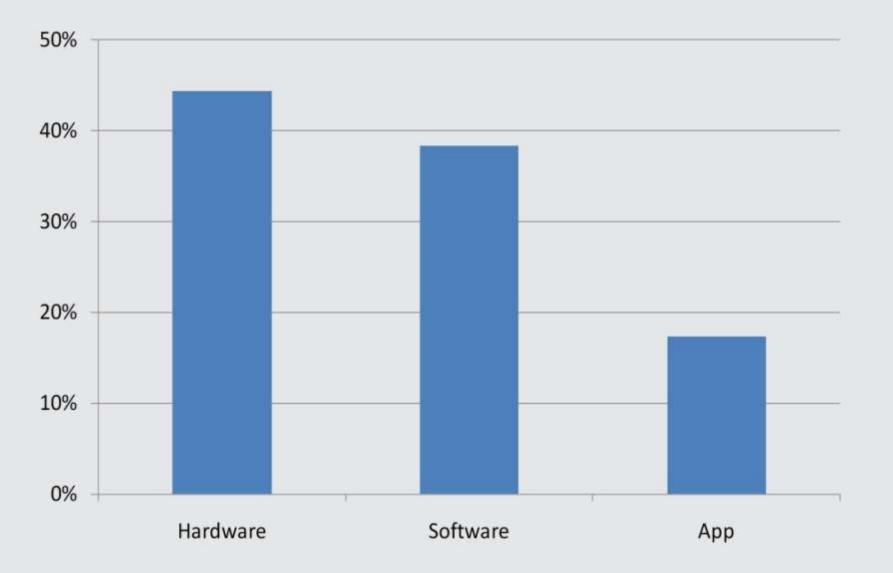
VALUE AND BENEFITS OF GEOSPATIAL TECHNOLOGIES





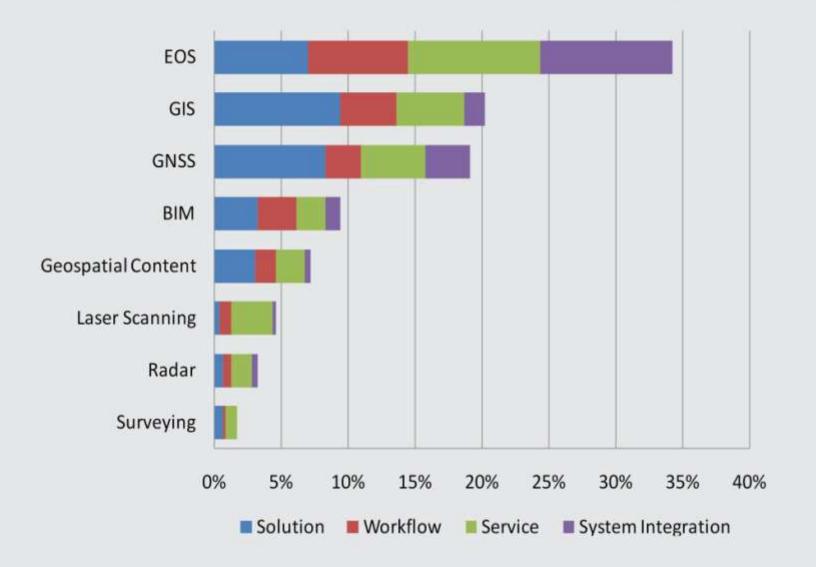
PRODUCT TRENDS





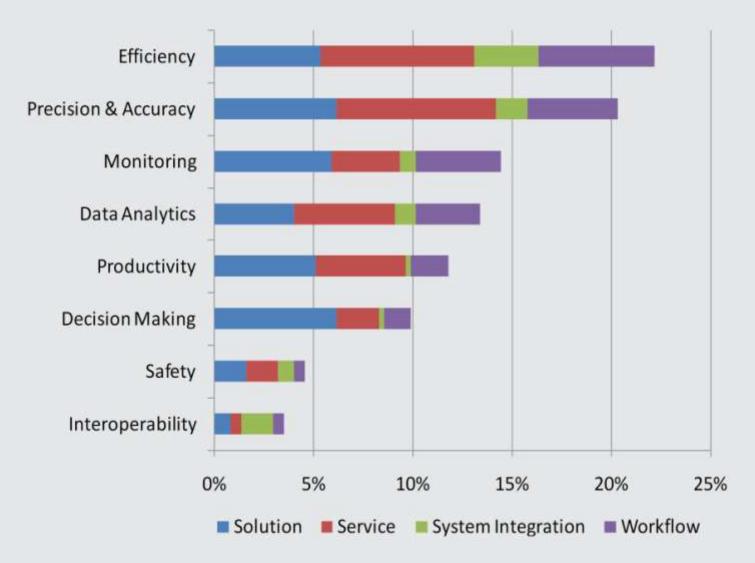
TECHNOLOGY WISE INTEGRATION AND CONVERGENCE





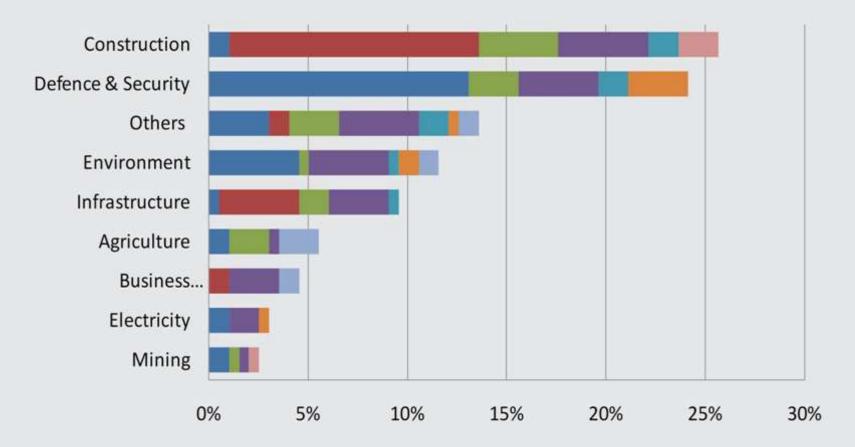
CONVERGENCE LEADING TO BENEFITS





INDUSTRY WISE ADOPTION OF GEOSPATIAL TECHNOLOGIES

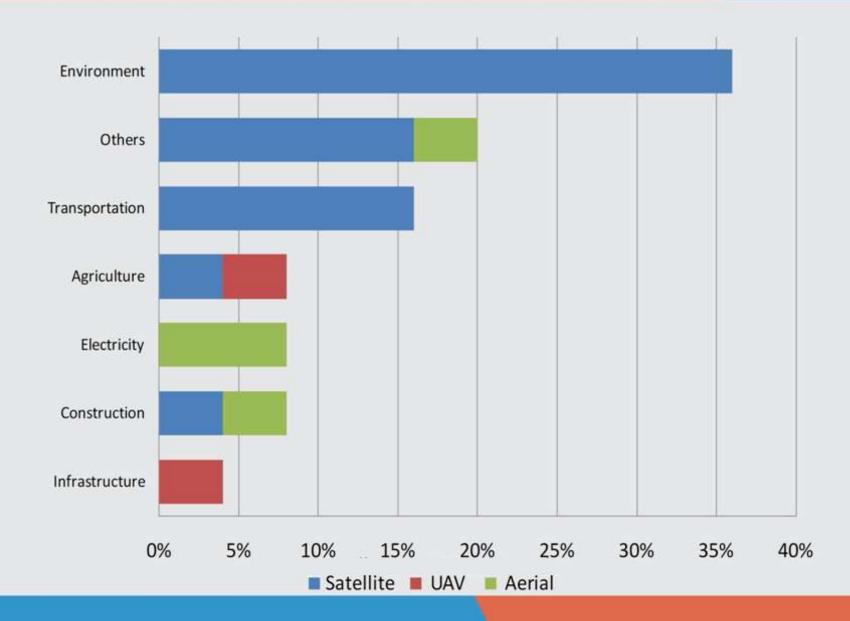




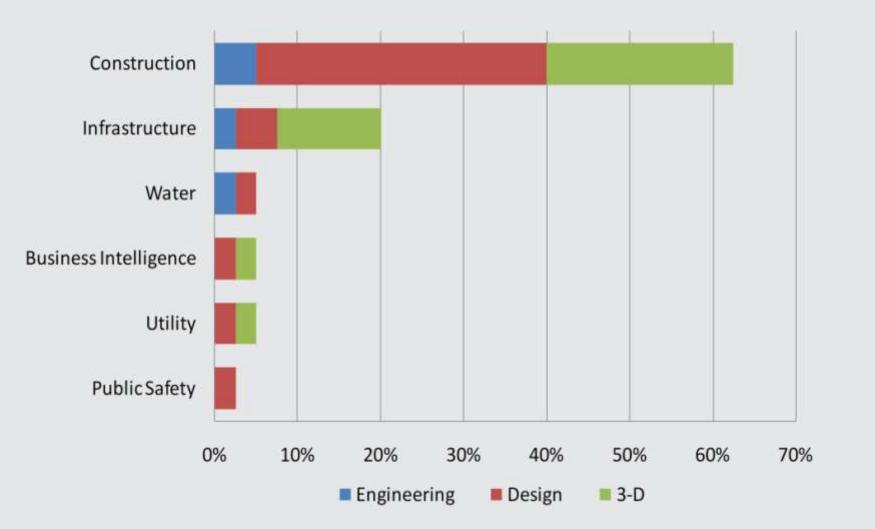
- EOS (Satellite, UAV, Aerial)
- BIM (Eng, Design, 3-D)
- GNSS (Machine Control, Fleet Management, Navigation)

APPLICATION OF EARTH OBSERVATION SYSTEMS



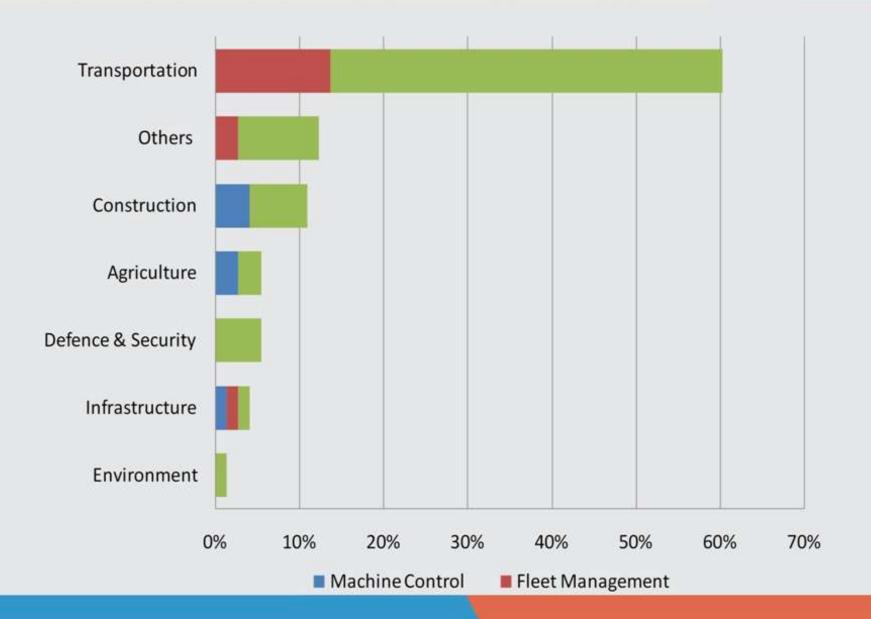


APPLICATION OF BUILDING INFORMATION MODELING



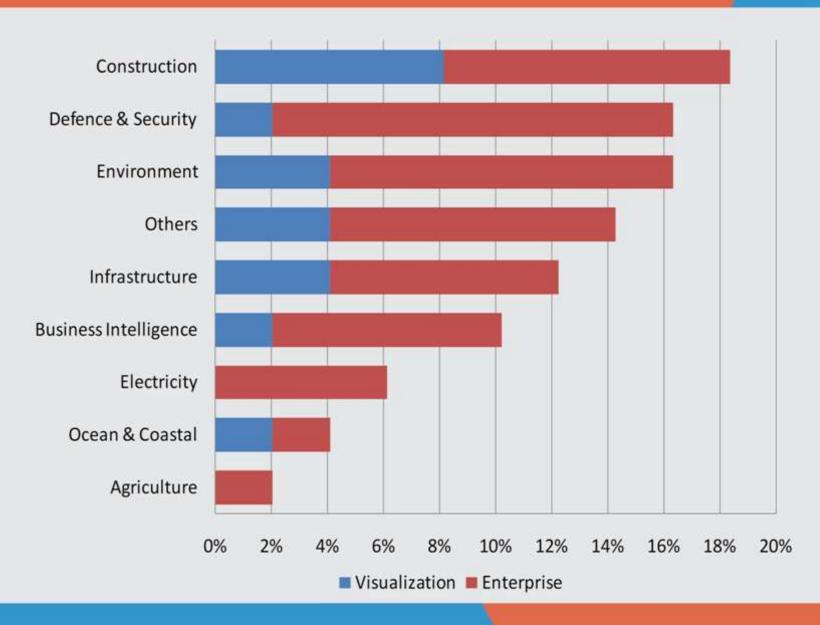
APPLICATION OF GNSS





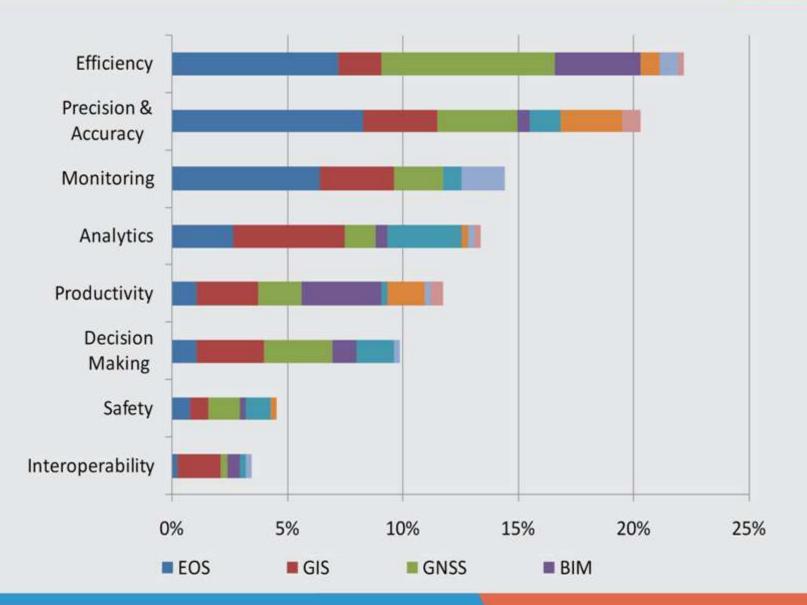
APPLICATION OF GIS





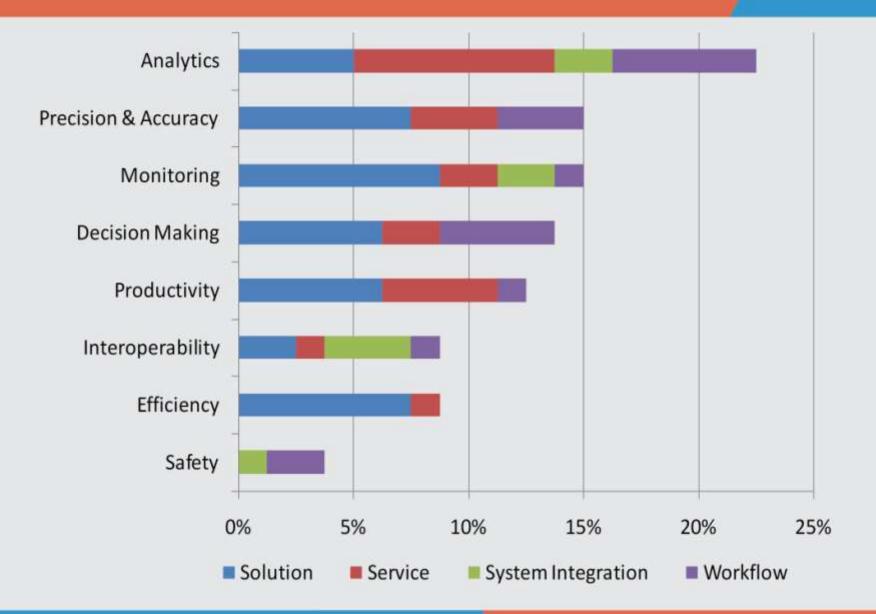
TECHNOLOGY BENEFITS





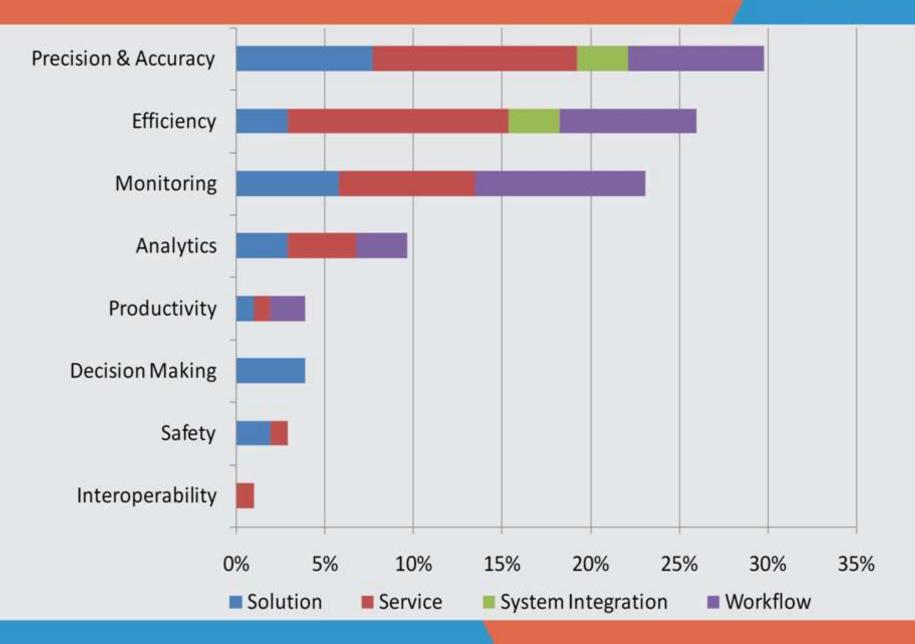
BENEFITS OF GIS TECHNOLOGY





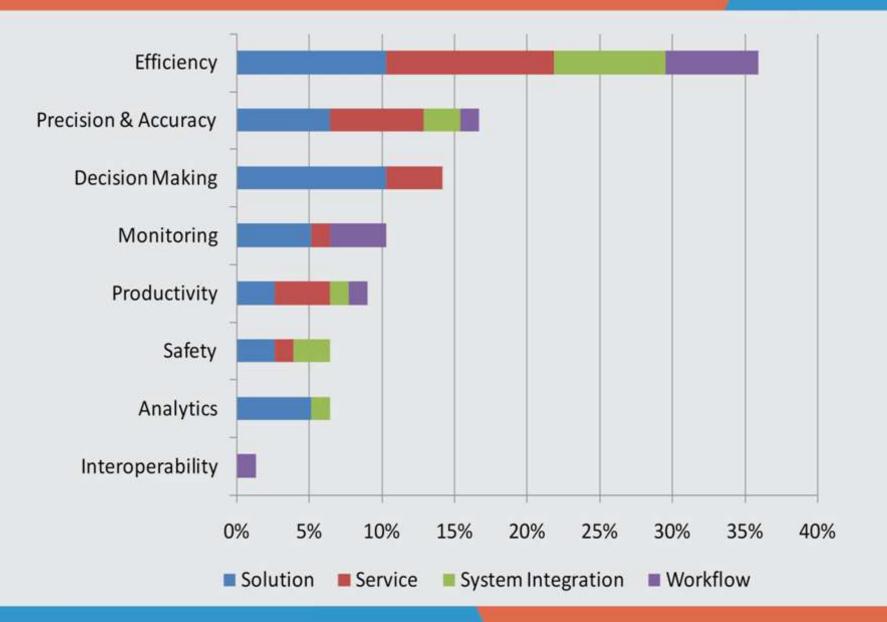
BENEFITS OF EARTH OBSERVATION SYSTEM





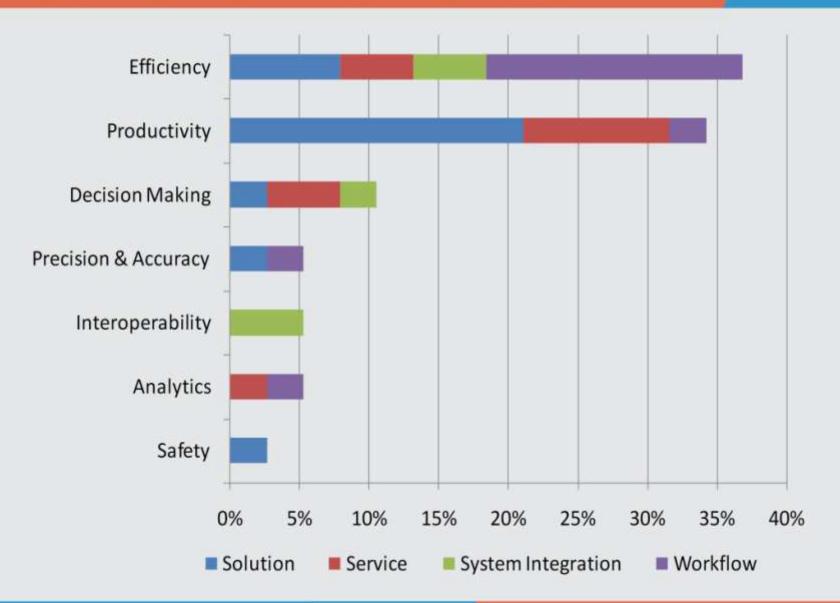
BENEFITS OF GNSS





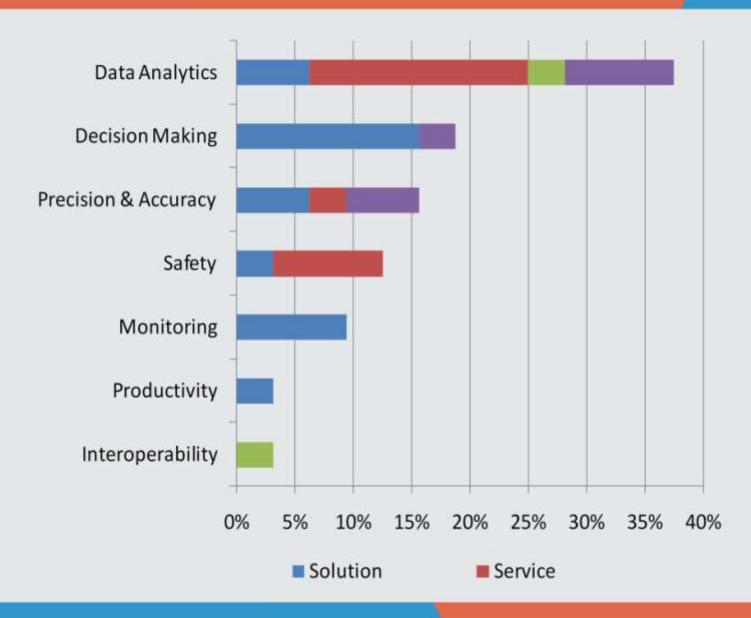
BENEFITS OF BUILDING INFORMATION MODELING





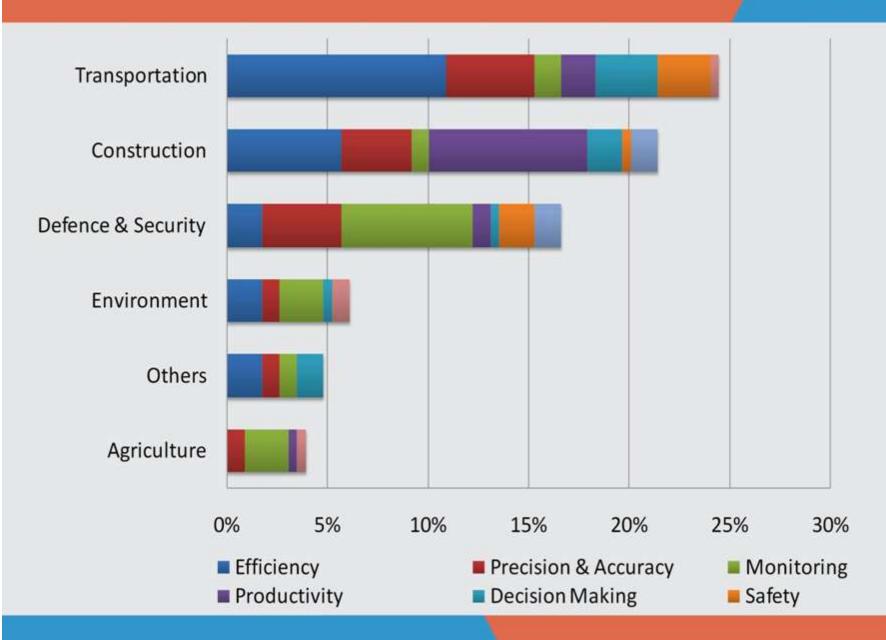
GEOSPATIAL CONTENT





BENEFITS OF INDUSTRIES





BENEFITS OF CONVERGENCE



