

Features and Benefits

Autodesk® Topobase™ infrastructure design and management solutions provide integrated, organization-wide access to spatial and asset information for engineering, GIS, operations, and business teams. Built on Autodesk Map® 3D, Autodesk MapGuide®, and Oracle® software, Topobase helps you to see the big picture and make better decisions, manage infrastructure assets more efficiently, and enhance data quality. Topobase is an open and flexible framework that can easily be configured to support your specific processes, and can be integrated with existing business systems without the need for expensive proprietary tools or middleware. Standard industry-specific data models, workflows, and business rules enable rapid implementation for a quick return on your investment.

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Feature	Description	Benefit
<p>Centralized spatial information database</p>	<p>Autodesk Topobase software integrates isolated islands of computer-aided design (CAD) and geographic information system (GIS) data into a centralized spatial information management database, built on the Oracle® Spatial database platform.</p> <p>Integrated technology enables multiple users and departments to concurrently access a common source of information. Any updates to the information are immediately available throughout the organization.</p> <p>Integration with other enterprise systems and legacy GIS systems is made possible by the Topobase open architecture and the native Oracle tools, such as SQL.</p>	<p>Merging of engineering data with GIS into a central database contributes to better decision making and results in more-efficient business processes across departments and job functions, as well as improved quality of data across the organization.</p>
<p>Integrated design and management</p>	<p>With Topobase, the work done during the engineering phase of a project using design tools such as Autodesk® Civil 3D® or AutoCAD® software applications can be used for ongoing asset management.</p> <p>The streamlined Topobase design and management approach benefits the entire organization. Data created by the design group remains accurate and relevant throughout the lifecycle of the data and across the range of users—including customer service agents, field operations, finance partners, and so forth—whether or not they have engineering and GIS expertise.</p>	<p>Improve efficiency of the infrastructure data lifecycle by minimizing the need for time-consuming data-conversion processes that reduce accuracy when you share the data across different departments.</p> <p>Use existing DWG™ data content and in-house CAD expertise for a quick return on investment (ROI) and help ensure data accuracy throughout your organization.</p>
<p>Open, flexible architecture</p>	<p>Topobase adheres to the Open Geospatial Consortium's specification and has a powerful application programming interface (API), in addition to native, industry-standard Oracle database tools for facilitating rapid point-solution development. The use of native Oracle database elements and structures and direct connectivity to Oracle mean that you don't need proprietary middleware, tools, or add-ons to connect with external data sources for custom solution development.</p>	<p>Get additional return on your investment in spatial information by using standard IT tools to create custom applications and interfaces with existing enterprise and GIS systems so you can meet the needs of internal teams, suppliers, or customers.</p>

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<p>Workflows/business rules</p>	<p>Workflows and business rules streamline data capture and maintenance by automatically enforcing standards for data accuracy. For example, the house creation workflow automates the steps to create a house connection by requiring the user to select a main pipe to connect to.</p> <p>Business rules automatically carry out task-related procedures, such as adding a fitting to the connection point between the house and the main pipe.</p>	<p>Improve productivity, quality of data, and efficiency by combining multiple steps into a single workflow.</p> <p>Maintain data quality at all points within the organization across all levels of users.</p>
<p>Industry-specific modules</p>	<p>Topobase includes industry-specific modules based on industry requirements. The data models contain commonly used database structures, fields, workflows, and business rules to capture and maintain infrastructure asset information.</p> <p>Further enhancements to suit specific industry needs are easy using the Topobase Administrator tools.</p>	<p>Reduce deployment time and realize better ROI with the built-in database structure, workflows, and business rules.</p>
<p>Bundled Autodesk Map 3D</p>	<p>The Topobase desktop client is built on Autodesk Map 3D software and includes all of its powerful CAD and GIS capabilities, such as the following:</p> <ul style="list-style-type: none"> • CAD design and drafting tools, such as geometry creation functions, snapping, and accurate geometric representation of geographic data • Access to multiple spatial and non spatial data formats • Ability to work in hybrid GIS environments with existing GIS systems and GIS data files such as ArcSDE[®], SHP • Productivity tools, such as georeferencing engineering designs to real world coordinates and coordinate systems, reduces effort and time spent 	<p>Lower your cost of operation by using existing in-house expertise with Autodesk design software.</p> <p>It is easier to find a workforce skilled in Autodesk design software. They can quickly become productive and have shorter learning times when using Topobase.</p> <p>Improve efficiency by having a single software environment for CAD data files to connect to Topobase and other data formats from other GIS systems.</p>

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<p>Bundled Autodesk MapGuide Enterprise</p>	<p>Built on Autodesk MapGuide® Enterprise software, Topobase Web takes advantage of powerful web-mapping capabilities to deliver a lightweight, browser-based interface to the database using the vector-based Autodesk® DWF™ Viewer or raster-based AJAX viewer.</p> <p>Topobase Web enables organizations easily access and securely share information internally and with remote users.</p> <p>The web platform is subject to the same quality checks and business rules as the desktop client. As a result, data maintained using the web is just as high in quality as that created using the desktop client. For example, a user has the same predefined options for pipe material type when using the desktop client to create the pipe or using the web client to edit the material type value.</p>	<p>Cost-effective, secure, browser-based access to spatial information across and beyond your organization enables users (for example, customer service agents, managers, field operations, remote offices, external contractors) to make better decisions and improve effectiveness.</p>
<p>Bundled Oracle</p>	<p>Topobase provides the option of purchasing a copy of Oracle at a fraction of the cost of the stand-alone version of Oracle.</p> <p>All the components to implement a turnkey infrastructure design and asset management solution are available in one box.</p> <p>Your organization gets complete Oracle relational database capability, along with its reliability and scalability, with the ease of implementation using Topobase.</p> <p>With the ability to automatically handle growing volumes of data, Oracle and Topobase can easily scale with your organization.</p>	<p>Lower costs and easier implementation of Oracle functionality result in quicker ROI.</p> <p>Gain the confidence that comes with knowing that your valuable data is maintained in the industry's leading relational database management system.</p>

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<p>Administrator</p>	<p>Using Topobase Administrator, administrators can</p> <ul style="list-style-type: none"> • Define user-access levels, user interfaces, and reports with visual design tools • Create and modify data models and manage attributes, data constraints, and business rules without having to be skilled in database administration <p>Topobase Administrator masks the complexity of Oracle by providing simple tools that perform the complex Oracle database management functions internally.</p>	<p>Save valuable IT resources by enabling an administrator with little or no Oracle expertise to maintain appropriate attributes in the database.</p> <p>Improve efficiency by optimizing Topobase to suit specific business needs.</p>
<p>Topology</p>	<p>Topobase automatically maintains area and network topological information for infrastructure assets. The network topology forms the building blocks of the utility model, which can be used for network analysis and network traces. The topology is automatically updated when new geometries are created.</p> <p>The area topology can also contain arcs (not stroked), and the different area topology layers can be intersected (for example, parcel management, land use).</p>	<p>Make quick and accurate decisions, reducing response time to outages.</p> <p>Improve customer satisfaction with higher quality of service as a result of quick analysis tools. For example, use these tools to identify customers who might be affected by a shut-off valve and then automatically generate a notification letter.</p>
<p>Jobs</p>	<p>Long-term transactions, or <i>jobs</i>, enable organizations to select an area of infrastructure that is being built or modified, keep the modifications separate from the base information, and have an approval process for moving completed jobs back into the physical as-built database.</p> <p>You can even set up two jobs for the same project to help evaluate design and cost alternatives. Once completed, all jobs are kept in a history status, so that you can view the infrastructure at any point in time.</p> <p>The long-term transactions capability makes Topobase software an efficient tool for land management and cadastral projects.</p>	<p>Reduce backlogs and inefficiencies by enabling multiple project teams to work from the same set of information at the same time.</p>

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Display Models	<p>Topobase uses the built-in Autodesk Map 3D display manager to render and stylize data.</p> <p>Use multiple drawing templates to define rendering and display rules, enabling users to visualize data in a manner appropriate to job function. For example, there could be a specific display model for the water design engineer that highlights the water network data, whereas a land planner might see cadastral data themed according to land use.</p>	<p>Increase efficiency by enabling users to display data in a manner that is relevant to job function.</p>
Forms and Report Designer	<p>Use visual, drag-and-drop tools to quickly customize user interfaces and even link external tables with features in a database. The Report Designer tool enables the administrator to quickly define report templates for ever-changing reporting requirements of state and local councils, among others.</p>	<p>Drastically reduce application development time and cost to customize system interfaces.</p> <p>Flexible reporting capabilities help organizations keep up with variable reporting and compliance requirements.</p>
Robust API	<p>Autodesk Topobase comes with robust client .NET APIs and server-side Java® APIs that organizations can use to create custom workflows, custom plug-ins, and rules to automate procedures within the Topobase framework.</p>	<p>Further enhance the capabilities of the software and cost-effectively create custom Topobase management modules for specific functions within the organization.</p>

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