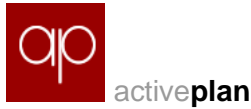


## Fact Sheet : Activeplan – How it works

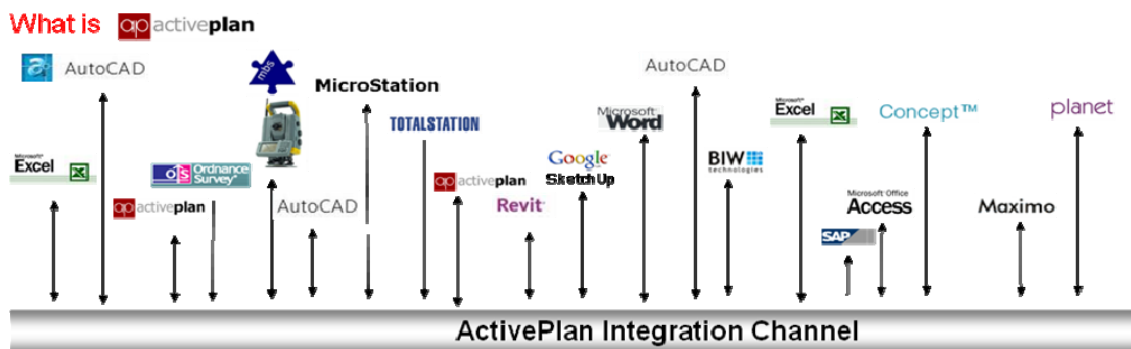


### What is Activeplan?

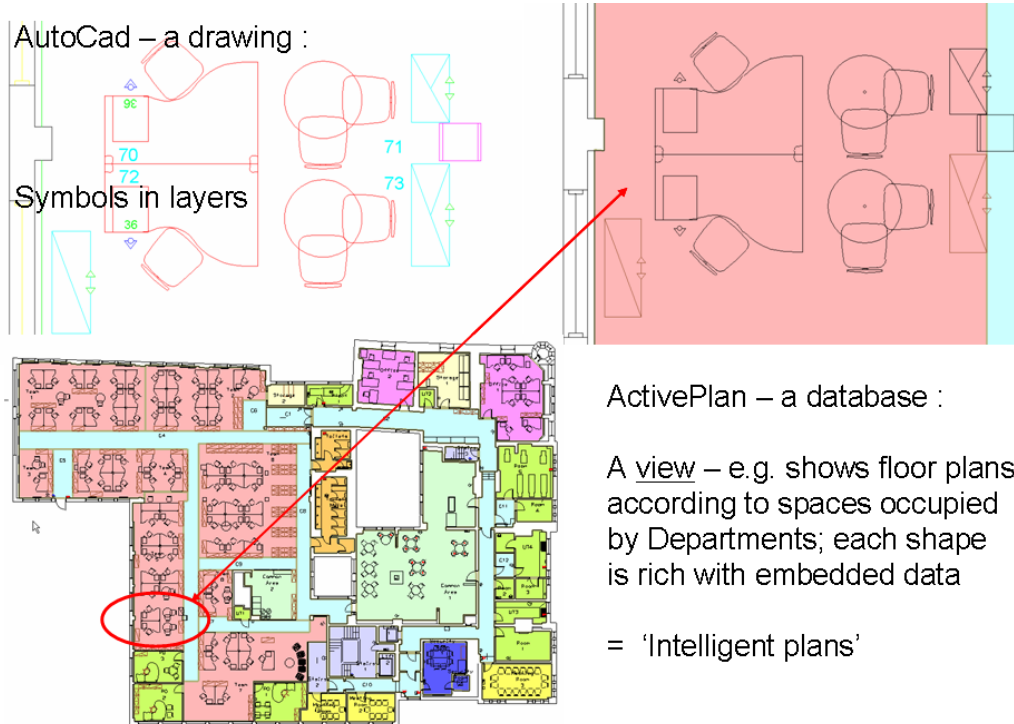
Activeplan is an integrated relational database (software) application capable of concurrently handling graphical data (i.e. drawings and maps) and non-graphical data (i.e. attributes and descriptions). It is designed to provide excellent visibility of “fixtures” in their “spatial context”, i.e. assets, utilities, components in relation to each other and to specific points of reference (origin).

Unique and powerful software script routines have been developed to bring together the graphical and non-graphical data entities to create intelligent objects, and a robust “data-cube” architecture enables very flexible and highly effective analysis and reporting. Activeplan is also unique in the ways in which data can be extracted and imported from, and exported to / exchanged with, other software applications. This is achieved using highly inter-operable data exchange protocols around the de-facto global standard of SQL.

What this means in practice is that activeplan can operate as a “data integration channel”, acting as the “glue” between many different software applications – providing a fast and reliable medium through which information can be exchanged and shared.



Fundamentally, and unlike conventional CAD packages (such as AutoCAD or MicroStation), activeplan is exclusively database-driven. Whereas the CAD packages produce drawings and maps comprising lines and symbols with meta data for identification purposes, activeplan uses the fixture (asset) and attribute data directly to generate a graphical view of the drawing components.



### How Activeplan works.

Activeplan essentially comprises 3 integrated database suites which, whilst each perform specific functions, operate together to provide the activeplan Solution.

These databases are:

- 1 Fixtures (asset) management database (the activeplan database)
- 2 Briefing and design development database
- 3 Organisation and user protocol database

#### 1. Fixtures (asset) management database [AP]

The fixtures (asset) management database, or the activeplan primary database, holds all the information about the discrete fixtures, components, entities, objects, assets, etc. in their graphical and non-graphical (attribute) state. Every separate asset or fixture is defined by a unique “ID” (Identifier Descriptor), and the data is structured to also enable the ID to be discretely defined by its attributes. The database also holds relational information, i.e. associativities, which mean assemblies of separate / discrete components can be expressed / shown together according to their relationships. Assemblies can also be “grouped” and given unique IDs. Composite assemblies (structures or models) are dealt with in the same way. The flexibility of the data structures within activeplan allows a “bottom-up” as well as a “top-down” approach to building the detail.

The SQL software interfaces within activeplan allow data from existing systems to be readily uploaded / integrated into the activeplan database. The software architecture also means that activeplan is fully scaleable, from individual components (nuts, bolts, etc.) to assemblies, sub-assemblies, structures, rooms (spaces), buildings, blocks, or an entire estate or portfolio. This makes it possible to quickly “drill-down” into project details for interrogation and reporting purposes.

Attribute data can be virtually anything which can be associated to / with a fixture, such as time (dates), costs, specification, performance, ownership, etc. and attributes can be categorised and compared in a variety of ways, such as - planned, actual (historic), or forecast (predicted). This means that fixtures can also be defined by their “Instance”, i.e. where and when they occur, including through ‘what-if’ scenarios.

## **2. Briefing and design development database**

The briefing and design development database is used in conjunction with the activeplan fixtures database. Primarily this handles configuration management and version control. It can also be used to assemble and compare datasets and identify and track changes between them, such as Initial Requirements (the Brief) and iterations of proposals (the designs). The same methodology is adopted for design to manufacture, and from manufacture to supply, from supply to construction assembly, from assembly to commissioning and completion and from completion to operation. Versions and changes can be compared and tracked throughout the process and intuitive “traffic light” exception reports are generated automatically by the software where differences in the data sets occur, or have occurred. This functionality also provides a complete audit trail of what is handed over, compared with what was required.

The briefing and design development database also handles the documentation associated with the development processes. A comprehensive range of documents can be output directly from the database ranging from requirements documents, layout drawings, fully co-ordinated room data sheets (RDS), equipment schedules, production information, O&M manuals, etc. The flexibility in the activeplan reporting routines means that these can be readily configured to suit specific customer and project needs.

## **3. Organisation and user-protocols database**

The Organisation and user-protocols database is used to assign, manage and control what each individual user can see and do. It governs both accessibility and security and operates on a series of hierarchies and relationships which can be fully aligned to how the participative parties (stakeholders) in a project or Venture wish to work / behave.

As well as the 3 core databases, activeplan runs in 2 primary forms:

- 1 “Desktop” loaded licensed software version (inc. client / server)
- 2 “Web Browser” - Activeplan Integration Channel

The web-based browser version provides excellent accessibility to the databases and reporting options over the internet. This version has more limited user functionality and is ideal for collaborative approaches.

The desktop / server based version involves more in the way of data management and operator expertise. The web-based browser is normally / can be fed by the desktop application.

In either version the user population sees the same information (depending on access / visibility rights), i.e. there is “one version of the truth”.

Because of the ‘open’ design and interoperability of the activeplan solution, the ways of working it promotes, means that project teams and contributors can still continue to use the systems they are familiar with, and retain “ownership” and control of their data. This means they feel more empowered to adopt it and support it.

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### **Specific opportunities for the deployment of activeplan**

Specific areas / issues within the development process where we believe activeplan could be beneficially deployed :

- Capturing the overall delivery brief and requirements, including respective Stakeholder interests and drivers
- Creating an initial fixtures catalogue / asset inventory, both graphically and in attribute terms, for the constituent components, assemblies, models and structures etc. required for the solution, by extracting existing datasets from current systems
- Refining and building / consolidating the component and asset database by adding further attributes and intelligence gathered during detailed briefing and design development works
- Creating 3D sketch-up models of key assemblies and structures to assist with Scheme visualisations
- Mapping the product design, development and delivery processes for the co-ordinated solution, including site and off-site manufacturing / production interfaces – including Macro and Micro logistics - to establish vital monitoring and control (verification / validation) points – both for status reporting and for data integrity purposes
- Establishing the optimum and target 'instances' for each component / assembly at key control points based upon the detailed planning and production schedules, including the site construction programmes, to map the demand, availability, supply and installation dates for progress monitoring and reporting purposes
- Creating the scheme specific desktop/ server application and activeplan databases and setting up, configuring and setting to work the web-based activeplan application including access and security protocols amongst the respective stakeholder and supplier interests
- Providing solution and applications consultancy to refine and optimise the database configuration and ways of working to maximise the effectiveness of the activeplan deployment as required
- Liaising with key product manufacturers and suppliers to dynamically import / update product data and information, including design and production data, to interactively respond to planning and delivery co-ordination needs
- Periodically run and produce configuration and change control reports
- Managing product data and associated documentation to create and compile Operating and Maintenance schedules and documentation concurrently with design and production and to make these available in compatible format with property management systems (if not continued within activeplan)
- Proactively seek and support continuous refinement and performance improvements across the end to end delivery process and products
- Carry out further process research and conduct pilot verification studies