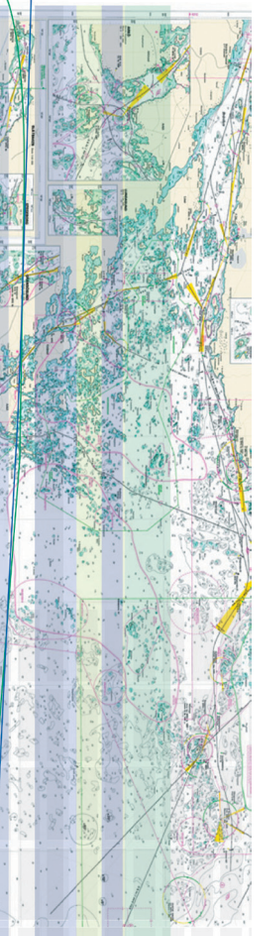


Documenting equity

"The change to ArcGIS is also a matter of mentally moving forward from having some digital map books to actually using it proactively in order to do registration, have customer dialogue, and be able to visualize data and solutions for customers, partners and others."

Head of Department, IT & Customer Services, at VCS Denmark, Jesper Nielsen.

VCS Denmark quickly discovered that ArcGIS gave them a number of advantages when it came to documentation, calculation, and business processes.

Background

For more than 150 years VCS Denmark (formerly Odense Vandselskab) has supplied the citizens of Denmark's third largest city, Odense, with clean water.

The utility is responsible for the collection and treatment of waste water for its key customers: the approximately 190,000 citizens and consumers in Odense. A number of smaller waterworks are also among VCS Denmark's customers for whom they store data and they also cooperate with many other utilities.

System upgrade and data conversion sparked system change

VCS Denmark's existing CAD system changed file format and at the same time they had to upgrade their primary water data model.

"We were facing a major data conversion process and had to change our coordinate system too," Director, Planning & Investments, Gerda Hald, recalls. This became the starting point for VCS Denmark's market research investigating new potential CAD systems and geographic information system (GIS) platforms.

Challenge

After thorough market research, VCS Denmark chose Informi GIS as their partner and ArcGIS from Esri as their new GIS platform and then the many conversions and changes began. The challenge was to convert the height system, the coordinate system, their platform, and the large water data model all at the same time.

"Considering the many balls we had up in the air at once, the easiest part was almost the change of platform," says Gerda Hald and continues: "But it has been a big challenge also in relation to the organization."

VCS Denmark quickly discovered that ArcGIS gave them a number of advantages when it came to documentation, calculation, and business processes.

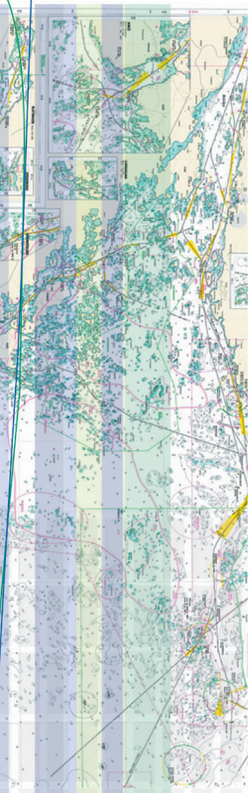
"Basically we need to control the registration of all our pipes and sewers and that's primarily what we use the system for." Head of Department, IT & Customer Services, at VCS Denmark, Jesper Nielsen, explains and continues:

"ArcGIS nearly meets all of our needs when it comes to documenting and actively using most of our investment – it is a couple of billions of our assets we have dug down in streets and alleys so it is by far the largest part of our equity."

Solution

Overview of the grid

The ArcGIS solution based on ArcGIS Server allows VCS Denmark to start using data in new ways.



Documenting equity

"In our old system, we had to do quite a bit of work just to see where the pipes and sewer systems where. With ArcGIS this is all of the sudden very, very easy. We can easily identify the oldest pipes and part of the systems and based on this information, we can determine if we need to take a closer look at some of them or if they correspond with the TV inspection data we have," states Henrik Willemoes, GIS engineer at VCS Denmark.

The solution has also given VCS Denmark a number of operational advantages, benefits related to the review, as well as created the foundation for a new business solution.

New business opportunities

With the GIS platform VCS Denmark had earlier, they were only able to offer the smaller waterworks storage of data but with ArcGIS they can provide a hosted web solution. The new solution will also give the smaller waterworks access to their own data 24/7 and allow editing online through an internet browser. Contractors and waterworks will also be able to use the service in order to obtain dig permits required by Danish law.

Results

Intelligent knowledge sharing

Besides a very well documented utility network, sewer systems and new business opportunities ArcGIS has given VCS Denmark a media well suited for knowledge sharing.

"It is a way of capturing peoples experience in a format where everyone can use it. That also makes it a way of storing knowledge in an intelligent way so in that sense it is also about knowledge sharing," says Henrik Willemoes.

Preparing for climate changes

Together with the water modeling software that is integrated with ArcGIS, their GIS is among the essential tools when deciding how and where to expand the sewer system and pipes in the coming years in order to adapt to and try to minimize the consequences of climate change.

As most experts expect more heavy rain and downpours in Denmark in the coming years VCS Denmark is currently improving and expanding the sewer system so that it can handle the larger water volumes. To this purpose ArcGIS and water modeling software like MOUSE that is part of MIKE URBAN from Esri business partner, DHI, is among the essential tools when deciding where new pipes will be placed and which to exchange. Thereby GIS is not only used by VCS Denmark to document the company's assets but to future proof them as well.

"ArcGIS nearly meets all of our needs when it comes to documenting and actively using most of our investment – it is a couple of billions of our assets we have dug down in streets and alleys so it is by far the largest part of our equity."

Jesper Nielsen, Head of Department, IT & Customer Services, VCS Denmark.

INFORMI GIS A/S
Jægersborg Allé 4
DK-2920 Charlottenlund
Telefon 39 96 59 00
Fax 39 96 59 34
informi@informi.dk
www.informi.dk

INFORMI GIS A/S
Lindholm Brygge 31, 1.
DK-9400 Nørresundby
Telefon 39 96 59 00
Fax 39 96 59 34
informi@informi.dk
www.informi.dk

INFORMI GIS A/S
Gråbrødregade 9, 2.
DK-6000 Kolding
Telefon 39 96 59 00
Fax 39 96 59 34
informi@informi.dk
www.informi.dk