'I Want GIS to be as Easy as iPhone'

Esri President **Jack Dangermond** believes in making GIS easier to use and available everywhere, much like the iconic iPhone. He says the company is constantly advancing its methods to innovate and stay ahead in a competitive world

You once said that "ArcGIS Online is to the geospatial industry, what Apple is to the music industry". How do you see ArcGIS creating a revolution of sorts for the GIS industry?

Yes, there are some similarities. Today, ArcGIS Online is being used to make millions of maps daily, using shared Web maps and geospatial datasets that are available as services. These geoservices are like music, in the sense that they can be immediately consumed in apps that are easy to use. This content and these apps are making GIS increasingly pervasive both within and across organisations.

Why are you so excited about the Web GIS architecture?

This new pattern is creating a revolution in the market — opening up the world of GIS to everyone through the use of web maps and related apps. Simple apps allow users to visualise, integrate and analyse geospatial data of all types. This capability, combined with the federated architecture of Web GIS, allows for integration of distributed databases from across an organisation.

ArcGIS Online represents the first complete Web GIS platform. It has been engineered to integrate everything that Esri and our users have done in the past and also incorporate emerging technology trends in computing and the geospatial world. It represents a transformational shift of GIS into a services-based platform. This form of Web GIS is an open and flexible architecture. It means users can easily configure the system and collaborate across, and between organisations.

Why do you think Web GIS is becoming so popular? Why is it growing so fast?

Fundamentally, this new pattern makes GIS easier, more accessible and more affordable. It also delivers whole new capabilities that are attractive to enterprise users. For example, people can easily make maps of their data as well as access and share these maps across an organisation. This is enabled by the fact that geospatial data is shared as services that can be immediately consumed in ready-to-use apps.

WebGIS also supports easy integration with other enterprise systems such as MS Office, SharePoint, and a host of ERP, BI, and CRM systems. Other capabilities include a built-in content management system, strong system administration tools, full identity management and security through enterprise security support. Finally, WebGIS includes a large and growing library of ready-to-use basemaps, image services and thematic overlays describing environmental, physical and cultural geography.

Esri seems to be slowly moving into consumer space with increased emphasis on Web and mobile solutions. Your comments?

Our technology is definitely getting easier with a series of apps that are easy to use and consumer like. However, our primary business remains with geospatial professionals and enterprise users who leverage our platform for their organisations.

One of the big trends is that our users in large organisations are beginning to use ArcGIS platform as a location platform for spatialising and mapping their enterprise data. This pattern is part of our strategy to support enterprise-wide geo-enabling for business professionals, field workers, decision makers and even citizens and consumers.

Esri is a private firm. Have you ever felt that this has limited the scope of your company?

We believe we can be far more effective in our mission of advancing GIS and serving our users by remaining a private organisation. It gives us time and resources to do what is right for our customers.

Clearly we are not as well-known as if we were a publicly traded or venture capital based company. However, I think our business structure has been helpful in our ongoing relationship with users. They trust us and work collaboratively because they know we are focused primarily on serving their interests.

How does Esri approach acquisitions such as Geoloqi, GeoIQ and Procedural?

Over the past several decades we have acquired a number of small technology companies that both enrich our core technology and also add great people to our development team. We do not approach these acquisitions as ways to make our business grow but rather as ways to improve our product and our development teams.

What, according to you, are the potential vertical markets for Esri?

We track over 50 user communities that one could traditionally think of as markets. We organise these into the broad categories of state and local governments, national governments, utilities, education, NGOs, commercial business and international organisations. Over the years, we have organised teams to support these vertical communities. This helps us communicate and better understand the requirements of our users. We also associate with business partners in these markets who leverage our technology and help our users in these segments be more successful.

Recently, we have been developing vertical application templates that help our users as well as partners configure our generic platform with focused solutions. We now have several hundred of these templates that are free, ready-to-use and supported by our technical support division. These apps include templates for utilities, local government, health, transportation, forestry, emergency management, environment and military.

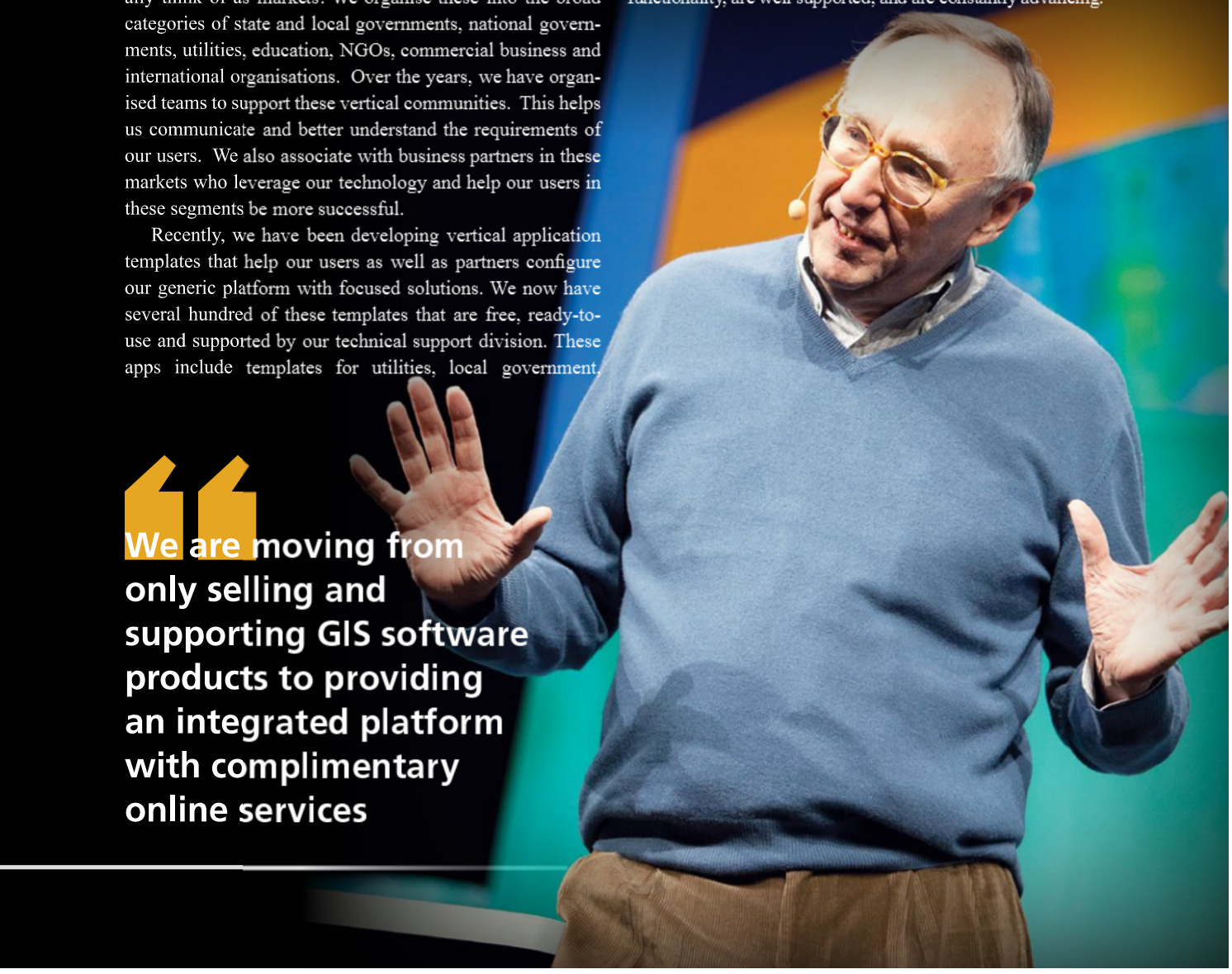
What distinguishes you from your competitors?

The geospatial industry continues to be a rich and evolving ecosystem of highly competitive technologies, data and solution providers with lots of smart people working hard. This is what makes it so dynamic and exciting.

While we work hard to be a successful independent company, we also believe in partnering. Over the years we have developed a rich and powerful ecosystem of software and technology partners who collaborate with us to serve our users.

Therefore, we are strong believers in supporting an open platform and embrace open standards to ensure interoperability with other technologies. We have also opened our platform for developers who are building thousands of end user solutions.

In terms of products, our traditional desktop and server technologies are distinguished because they have very rich functionality, are well supported, and are constantly advancing.



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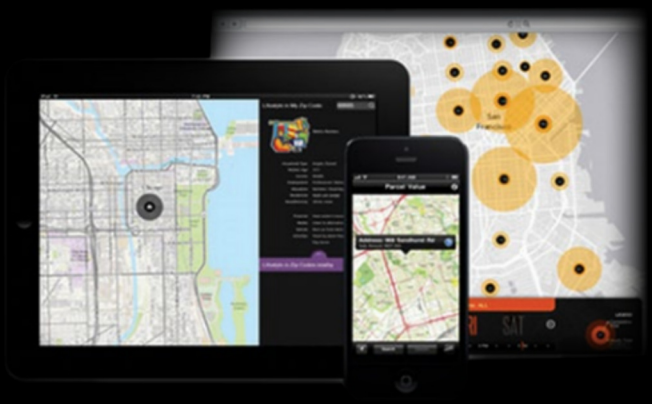

While there are some overlaps between ArcGIS Online and consumer Web mapping systems, our platform is distinguished because it is part of a complete system and because of its ability to perform high quality analytics, data management and cartography.

Would you want to elaborate on the R&D?

Esri spends about 22% of our revenue on R&D. This is about two to two-and-half times more than most of the technology companies. We can do that because we are not a public company.

How is your product and business changing?

We are moving from only selling and supporting GIS software products to providing an integrated platform with complimentary online services. This has meant consolidating our software product into a single platform that is fully integrated with cloud services.

Going forward, our technology is delivering many new capabilities, including more integration of real-time and 3D data. Our desktop product, which is one of our premier products, will soon make a huge advance with the release of 10.3. This will make the desktop experience much easier; more like apps and embrace the Windows-8 user pattern.

Would you say Esri is evolving from being a software provider into a content company?

In some ways, yes. Clearly, we are investing heavily in creating ready-to-use content for our users. We are also making content a fundamental part of our platform. Some of this content is being built by partnering with our users. This includes thousands of organisations who work with us to create 'community base maps'. We are also integrating data from a number of commercial content companies such as DigitalGlobe, RapidEye, Airbus Defence and Space, HERE, Accuweather, etc. into our system so that their content is more directly available to users.

You brought out an analogy some time back on earth as a living system and Internet as the nervous system, and you said GIS can give rise to a new intelligence.

Yes, this is a useful metaphor for understanding what is happening. Certainly the evolution of the Internet, the increasing advancements of sensor networks together with Web GIS will increasingly help us know and understand our world in real time.

Our new Geo Planner App available on ArcGIS Online is the first example of this. It is based on the concepts of geodesign and encapsulates the steps of measuring, analysing, and modeling geography with the design, evaluation and decision making process. This app is the first major example of the nervous system in action. The app requires systematic geographic data and we are aggressively building this out for the planet.

I am hopeful that we will continue to digitise and wire up the planet with more measurements and those measurements will be used to help us make better decision making everywhere.

Do you see GIS is on its way to becoming a very pervasive technology just like GNSS/GPS has become?

Yes, that is exactly what we are trying to accomplish with Web GIS. These efforts are making the GIS easier to use and available everywhere. I want it to be as easy as the iPhone. GIS has evolved enormously from the mainframe days and it keeps getting simpler. As this technology evolves, it will have a huge impact on creating our future.

What has been the key to your success in translating your ideas into a sustainable business?

Staying focused on both our customers' needs as well as what it takes to create a sustainable business. Organisationally, we are very conscious of managing the resources of our company carefully. Going forward, I believe that by working hard and innovating on behalf of our users, we will continue to be successful.

Where do you see Esri five years down the line?

We are pretty grounded in continuing to evolve our technology and supporting our users. The market is transforming, and we have an opportunity to collaborate and affect a much larger community with our innovation. We are partnering with our users and evolving our organisation to be more responsive to this.

We do not take our position in the market for granted. We recognise it is a competitive world and we are constantly advancing our methods to innovate and stay ahead.