Raising the Level of GIS Education across Africa

By Michael Gould, Esri Global Education Manager

Michael Gould discusses GIS education in Africa.

If you've been paying attention to international news, you know that the African continent is growing faster than any other in terms of real gross domestic product. But single numbers (especially GDP) can deceive due to the huge diversity of the 55 nations, from relatively rich South Africa to the poorest: Central African Republic (CAR). What is clear is that education has been a key driver of this growth, and although Esri has been supporting educational programs across Africa over the years, recently the effort was stepped up. The Esri education team, in partnership with local Esri distributors, has been challenging universities (and some secondary schools) to raise their level of GIS instruction and research by both spreading the value of GIS to more disciplines and by expanding beyond desktop GIS to include also server, web, and mobile applications.

As we have been traveling around the continent more intensively these past two years, we have been consistently amazed by several things. One is that GIS is being used in pretty much *every* university on the continent. And not just any GIS for the sake of cost or simplicity: ArcGIS is consistently the software of choice. When we ask about this, the response is clear: job opportunities.

Alas, ordinary department or faculty budgets often are irregular and do not facilitate fixed annual payments, so Esri's distributors have found a wide range of creative solutions to be sure that instructors and students are getting access to the enterprise software they need, provided the software is being used and not shelved.

Another amazing thing we are finding is that more and more students are carrying personal laptops and are connecting to the Internet via campus Wi-Fi. This is a radical change that has taken place over the past two years and one which is causing some universities to rethink plans for future computing laboratory investments as well as the possibility to assign project work to be accomplished outside class. Most GIS students we talked with grumble that they are able to use the software only in specific laboratories and timeframes.

We have been amazed to tour some pretty dilapidated buildings only to stumble on a buzzing IT center full of racks of new servers and routers, run by twentysomething IT managers. These centers have been able to leapfrog decades of legacy rules and practices, which often can bog down a large and well-established university. In many cases, these IT managers are eager to jump in and become protagonists in creating a campus-wide GIS infrastructure.

There is still much need for progress; however, there are many success stories across Africa to be told, and as a new round of GIS education projects starts to take root, we will do our best to tell their stories.