

► COMMENTARY

## Measuring IT Investments: A Non-trivial Exercise

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In their paper, “Measuring Information Technology Investment among Canadian Academic Health Sciences Centres,” one gets the impression that Pederson and Leonard felt a need to share their frustrations. Not only was their task difficult (i.e., trying to get a meaningful grip on how much is being spent on information technology), but the lack of co-operation they encountered must indeed have been exasperating. Having also experienced the “reluctance-to-reveal” phenomenon, this commentator can sympathize with their trials and tribulations.

Determining the true cost of information technology (IT) across organizations is indeed a difficult task for a number of reasons. First, as Pederson and Leonard point out, there is little consistency across Canadian healthcare organizations as to what is to be included in the IT domain, let alone the information management (IM) domain. As part of a fourth-year course taught at the University of Victoria in 2004, 28 Chief Information Officers (CIOs) were interviewed by students and asked to describe the departments for which they were responsible. The survey found that the CIOs were heading divisions that had 17 different names, with information management leading the way – used in four sites. To say that our Canadian healthcare CIOs are responsible for a diverse set of departments is an understatement. Areas of responsibility range from the usual information management and technology (IM&T) to others such as networks, health records, decision support, telecommunications, biomedical engineering services, switchboard and information desk, library services and privacy. The areas for which the CIOs were responsible generated a list that was two pages long! Little wonder it is difficult to find a common set of measurements as to what the IT investment really is.

A second reason that it is challenging to measure the value of IT investments is because, as Pederson and Leonard point out, “Chief Information Officers (CIOs) and Chief Technology Officers (CTOs) find themselves under increasing pressure to defend the value proposition of IT.” A recent paper by Bend from the Institute of Public Policy Research in England, entitled, “Public Value and eHealth,” puts it even more bluntly: “Despite the clear potential, really solid evidence of a positive impact of IT in

practice is still quite scarce.” This is not a conducive climate for measuring and revealing one’s true costs.

The conundrum of measuring the IT function is that:

- efficiency (*doing things right*) is easier to measure than effectiveness (*doing the right things*)
- since effectiveness (*doing the right things*) and innovation (*doing new things*) cannot be readily quantified in terms of traditional outputs, improvements are not usually reflected in economic efficiency statistics
- new systems are intended to change difficult-to-measure actions
- strategic systems elude measurement
- infrastructure investments cannot be cost-justified on a Return On Investment (ROI) basis

As with any infrastructure, IT infrastructure does not provide direct business performance. Rather, it enables other systems that do yield business benefits. IT infrastructure is strikingly similar to other public infrastructure such as roads, hospitals, sewers, schools and so on. They are all long term and require large investments. They enable business activity by users that would otherwise not be economically feasible. They are difficult to cost-justify in advance as well as to show benefits in hindsight. They require a delicate investment balance: too little investment leads to duplication, incompatibility and suboptimal use; too much investment discourages user investment and involvement and may result in unused capacity.

IT in healthcare, that is, the electronic health record (EHR) journey, is very much about infrastructure.

### About the Author

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