

NRC boss orders scientists to focus on 'market drivers'

Less time for pure science has researchers fearing for their jobs

BY TOM SPEARS, OTTAWA CITIZEN MARCH 20, 2011



John McDougall, president of the National Research Council, wants to make individuals more accountable for their work.

Photograph by: Shaughn Butts, Postmedia News, Ottawa Citizen

There's radical change at the National Research Council, Canada's biggest science institute, as the new president orders all staff to direct research toward boosting economic development and technology, with less time for pure science.

Starting this spring, 20 per cent of research money, and all the capital funds that buy expensive lab equipment, will be removed from existing budgets and directed where the president and vice-presidents choose.

Eventually, 80 per cent of research funds will be redirected this way.

NRC president John McDougall has announced to all staff that he wants research that is "successfully deployed and used to benefit our customers and partners in industry and government."

His memo, dated March 2, warns that "history is an anchor that ties us to the past rather than a sail that catches the wind to power us forward."

The new system, with most funding awarded by top management, will put existing staff in a position of having to apply to their employer to keep doing their own work. So far, they aren't faring well: McDougall notes that his scientists have suggested more than 70 research areas. But most of these have no clear "market driver" or "purposeful direction," he writes.

As well, he says, too many separate institutes (divisions of the NRC) are duplicating each other's work.

Some NRC scientists fear for their jobs as a result. And their fears echo those of federal scientists in other departments whose work has been politically directed and who are forbidden to discuss their findings by the Harper government.

Since its founding in 1916, the NRC has had to balance "basic" research, or study of the world around us with no fixed goal in mind, against "applied" work of immediate use in hospitals, factories, mines, farms and spaceships.

The new memo pushes the NRC labs firmly toward the applied side:

"We intend NRC to be a purposeful outcome-based organization -the best RTO (research and technology organization) in the world contributing to Canada's future economic success."

And the wording leaves little room for dissent.

It says that senior managers are generally "rallying behind the new agenda. Those who are still hesitant will need our help to develop their courage and conviction."

McDougall's memo promises to make individuals more accountable for their work, and to "reward good performance (and) find ways to deal with weak performance."

McDougall, a Calgary engineer and businessman, was appointed by the federal government to lead the NRC last April.

NRC officials wouldn't talk about the new strategy. They issued a brief e-mail that says, "we are evolving to keep up with the needs of the country.

"The goal is to advance Canada's position in the innovation landscape. As the Government of Canada's leading science and technology organization, the NRC will support innovation by Canadian industry and economic development overall."

But they refused to answer questions such as whether any staff could lose their jobs.

Still, news of the changing direction is reaching the outside scientific world. Senior NRC officials have been consulting with universities about the universities' research relationships with industry.

The new strategy makes some veteran scientists nervous.

"Qualitatively it doesn't sound different from what has happened in the past," said Henry van Driel, president of the Canadian Association of Physicists and a University of Toronto professor. That's because NRC has always been told to support industry.

"But quantitatively it may be that the shift is implemented more dramatically" than in the past.

"I hope it doesn't come at the expense of the significant capability they have in basic research. Without basic science, there's no science to apply.

"And it's very hard to anticipate what the next breakthrough will be." Thirty years ago no one "sat at a table and said, 'I want to invent an Internet, I want to invent a Black-Berry (or) a flat-screen TV based on liquid crystal displays,' " he said. "A lot of that comes from people . discovering properties of matter, discovering properties of materials" for others to apply later.

"You do need to balance," said Paul Vincett, who chairs the Canadian Consortium for Research, an umbrella group of 18 associations of university staff and students.

"With what they've prescribed -it sounds wonderful in principle, but the problem is: How do you judge it? It's very hard to predict the future in science." Trying to help industry and government "typically means focusing on the short-and mediumterm things," he said. "You're liable to miss other things . which would have a payout farther in the future, but which might be much more important in the end.

"All the evidence is that you cannot predict what are going to be the big things in the future. Who would have predicted the World Wide Web? And that came totally out of basic science. On the other hand you have to be responsive to industry's needs. And I think it (NRC) has been."

McDougall's memo concludes by telling employees they'll need "the right attitude and the right behaviour . In the months ahead -stay proud, get excited, continue to work and remember 'WE ARE ALL NRC.' "

NRC has an annual budget of \$749 million, and has 4,280 employees.

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