



Measuring a Tech Transfer Office's performance

Introduction

Sometimes the performance of a TTO, to assess whether it is achieving its mission and performing satisfactorily, is measured by looking at its Profit and Loss Account (P&L), to see whether it has operated at a profit, or at a loss, and to see the extent of such a profit or loss.

A profit is judged to indicate good performance, and the higher the profit, the better the performance. Conversely, a loss is judged to indicate poor performance, and the greater the loss, the poorer the performance.

This is certainly one way of measuring a TTO's performance. But is this the best way of doing so?

A TTO may have an impressive profit recorded on its P&L. But that could be the result of a single successful license, and the TTO might otherwise be performing poorly in the achievement of its mission. Conversely as well, a TTO may have a modest profit on its P&L, or even a loss, yet it may be performing outstandingly well in the achievement of its mission. It depends how a TTO's mission is defined.

Is its mission to earn a profit?

Most would say that a TTO's mission is more than to earn income, and to make a profit. If its mission is simply to make money, then looking at its P&L will reveal if that simple mission is being achieved.

But usually a TTO's mission is a more complex one. Not that there is anything the matter with a TTO making money. A TTO's revenue provides income for example, for more research, for the equipping of labs, and for the purchase of expensive laboratory equipment. It also provides income, a proportion of which is distributed to the inventors or creators of the intellectual property the commercialisation of which earned that income. It also provides income for the university or research organisation itself, better equipping it to meet its infrastructure and other needs.

A more complex mission

But a TTO has a more complex mission. Its mission needs to be considered in the broad framework of the university's mission. A university's mission is often framed by reference to teaching, research, and community service.

By definition, it is a little difficult for a *technology transfer* office to impact upon a university's teaching mission. But a TTO can make a significant contribution to the university's other two missions. The TTO's own mission could be described as:

1. to assist the university's mission of carrying out research
2. to assist the university's mission of service to the community.

How a TTO achieves its mission – increasing research

A major way that a TTO helps the university achieve its mission of doing research, is by the TTO attracting research funds to the university that the university might not otherwise have received.

A TTO does this by seeking out opportunities with industry partners for contract research, sponsored research, and collaborative research. A TTO therefore creates opportunities for research, funded by sources other than public sources of research funding.

The research funds received under these contracts increase the university's capacity to do research. They add to the total research budget of the university. But they do not impact on the TTO's P&L account, since normally all the monies received from the industry partner, apart from the TTO's modest administration fee, are paid to the university.

The activity of seeking out relationships with industry, to foster and promote the university's research skills and expertise may well be one that operates at a modest profit, or a modest loss, but in either case may bring in significant industry research monies into the university.

The amount of funding granted to a university by Government is subject to complicated criteria and

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formulas. Included amongst that criteria in some countries, is the amount of research monies received by the university. The rationale is that the more research monies that a university can attract from competitive grants and competing for industry research funding, then the greater its research capability and the greater its reward, as well as the greater accommodation of its research objectives. This effectively means that the more research monies a university attracts then the greater the research funding the central university receives from Government.

Rather than looking at the TTO's own P&L, a more revealing measure of a TTO's performance may be looking at the amount of research funding that the university received, but would not have secured without the TTO's assistance:

1. the amount of industry research monies secured by the TTO, and
2. the component of Government research funding awarded to the university based on the amount of industry research monies secured by the TTO.

How a TTO achieves its mission –the University's community service

An important way that the University serves its community is by teaching its future leaders and entrepreneurs. Another way that the University serves its community is by making the outcomes of its science and technology research contribute to the social and economic improvement of the community. It is public funds which funded the research whose outcomes are therefore intended to benefit the public.

The achievement of this objective occurs by technology transfer, whereby the university's research outcomes are made available to industry partners, for example by licensing, to enable them to commercialise the new products, services and knowledge arising from the university's research. The commercialization of these new products, services and knowledge results in:

1. superior products and services available to the community
2. increased employment
3. potential exports, improving balance of payments
4. potential import replacement, improving balance of payments
5. more income in the community from increased employment and increased business profits, as well as its multiplier effect in the economy
6. an increase in the tax base, enabling more taxes to be collected, and in turn allowing Government to apply its increased tax revenue to fund worthwhile projects benefitting the community.

But to achieve these objectives, technology transfer requires patience. The average time between the date of execution of a license for a biotech technology, to the first sale of the licensed product, and therefore the first receipt of royalties, is 8 years. For an engineering technology, the time for royalties to be received could be 3 to 5 years. Even for software, with the quickest time to market, it can be 1 to 3 years. Measuring the performance of a TTO, given these timeframes, is therefore a more complex exercise than looking at its P&L. In fact, looking at its P&L can be misleading. It could record an impressive profit from a single transaction, yet the TTO may have underperformed in the achievement of its mission. Or, it could record a modest profit, or even a loss, yet have made an extraordinary contribution to the service of the community and the achievement of its mission.

A TTO's metrics

Apart from looking at a TTO's P&L, other metrics to measure its performance could be:

1. the amount of industry research monies secured to the university by the TTO
2. the component of Government research funding awarded to the university based on the amount of industry research monies secured
3. how many new jobs have been created by the TTO's licensees as a result of the opportunities created by the licenses
4. what the gross salaries of those persons are
5. how much revenue licensees have realized from commercializing licensed products and services
6. how many new businesses have been formed
7. how many start up companies have been formed
8. to what extent have 3 to 7 occurred in the university's region, in the country, and internationally
9. how many vaccinations of a new vaccine have been given
10. how many patients have been treated with a new drug
11. how many patients have had a diagnosis of a condition
12. how many lives have been saved.

Answering some of these questions may involve effort to collect this information. But measuring this will indicate, much more accurately, whether the TTO is assisting the university to achieve its mission. Just as a university's achievement of its mission is not measured by how much money it receives and spends, so also a TTO's achievement of its mission cannot be judged by the simple criteria of how much it has received and spent.

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