Business Statistics Transformation (BST) in the Central Statistics Office (CSO) Ireland – Modernisation of Data Collection and Dissemination

Tara Davis (Central Statistics Office, Ireland
tara.davis@cso.ie

Abstract

The landscape of Business Statistics is changing at a fast pace and CSO Ireland are committed to keeping up to speed. The office is going through a period of significant change with a number of transformations ongoing simultaneously. Our Social Statistics are coming to the end of a very large scale transformation introducing CATI to our household surveys and redesigning the systems and processes the office uses to produce our social surveys. Our technology directorate is commencing a journey of restructuring to align their systems and processes with the General Statistics Business Process Model (GSBPM). Macroeconomics is moving away from the use of excel spreadsheets, all of these examples are part of the CSO’s overall modernisation programme. With these and other significant changes simultaneously occurring, we in Business Statistics thought long and hard on whether we were right to begin our own journey of transformation.

To be honest we are a little nervous, we are still wounded by past experiences of large scale projects where over scoping, unrealistic targets, lack of resources and skillsets prevented the success we were hoping for. In asking ourselves why we want to transform our Business Statistics, it was evident that to protect our key asset we needed to do this because our staff needs this transformation.

The current structure of Business Statistics has resulted in our staff experiencing extreme pressure at times due to significant peaks and troughs. Surveys by their nature can be cyclical; however we are focused on rebalancing this pressure to challenge our staff in a more effective manner introducing greater variety to their work while also adding value to our processes. BST will involve transforming how we collect and disseminate our Business Statistics. The BST programme is a multi-year, multi-project stream of activities some of which can run in parallel to each other and some of which will be significant stop/go points in the process. The aim of the transformation programme is to “make Business Statistics better” aligning how we produce our statistics to the General Statistics Business Process Model (GSBPM).

We are aware of the challenges in undertaking this transformation programme but we are hopeful that having learned the hard way previously, we are ‘hopefully’ going into BST with our eyes wide open.
Business Statistics Transformation (BST) in the Central Statistics Office (CSO) Ireland – Modernisation of Data Collection and Dissemination

Tara Davis
tara.davis@cso.ie

Central Statistics Office,
Skehard Road,
Cork,
IRELAND
www.cso.ie

1 Executive Summary

The landscape of Business Statistics is changing at a fast pace and CSO Ireland are committed to keeping up to speed. The office is going through a period of significant change with a number of transformations ongoing simultaneously. Our Social Statistics are coming to the end of a very large scale transformation introducing CATI to our household surveys and redesigning the systems and processes the office uses to produce our social surveys. Our technology directorate is commencing a journey of restructuring to align their systems and processes with the General Statistics Business Process Model (GSBPM). Macroeconomics is moving away from the use of excel spreadsheets, all of these examples are part of the CSO’s overall modernisation programme. With these and other significant changes simultaneously occurring, we in Business Statistics thought long and hard on whether we were right to begin our own journey of transformation.

To be honest we are a little nervous, we are still wounded by past experiences of large scale projects where over scoping, unrealistic targets, lack of resources and skillsets prevented the success we were hoping for. In asking ourselves why we want to transform our Business Statistics, it was evident that to protect our key asset we needed to do this because our staff needs this transformation.

The current structure of Business Statistics has resulted in our staff experiencing extreme pressure at times due to significant peaks and troughs. Surveys by their nature can be cyclical; however we are focused on rebalancing this pressure to challenge our staff in a more effective manner introducing greater variety to their work while also adding value to our processes. BST will involve transforming how we collect and disseminate our Business Statistics. The BST programme is a multi-year, multi-project stream of activities some of which can run in parallel to each other and some of which will be significant stop/go points in the process. The aim of the transformation
programme is to “make Business Statistics better” aligning how we produce our statistics to the General Statistics Business Process Model (GSBPM).

We are aware of the challenges in undertaking this transformation programme but we are hopeful that having learned the hard way previously, we are ‘hopefully’ going into BST with our eyes wide open.

2 Current Situation and Programme Scope

CSO Ireland is a multi-location National Statistical Institute (NSI) with three offices, two in Dublin and the head office in Cork. The Dublin offices produce Macroeconomic and Census of Population statistics, the Cork office produces Business and Household surveys while also housing all support services.

The Business Statistics directorate consists of 200 staff representing over 25% of staff costs. It also produces 30 statistical products equating to 170 releases a year. In deciding the scope of the programme we felt it important to prioritise and not to aim to “boil the ocean” and therefore limited the scope to the Short-term Statistics and Structural Business surveys divisions. These two divisions represent over 120 or over 15% of CSO staff, who under the current regime experience significant peaks and troughs. While limiting the scope to the two divisions it was agreed that scalability be a key principal of the programme allowing for the addition of other business surveys and their processes in the future. Such surveys could include our Prices Statistics and Census of Agriculture. In allowing such scalability we are laying the building blocks that it may also be possible to one day merge our Business and Social statistics data collection units.


There are a number of drivers for the BST programme:

3.1 Peaks and Troughs

The STS and SBS divisions consist of 120 staff that experience significant peaks and troughs due to the cyclical nature of some surveys. One of the key goals of BST is to merge the work of the two divisions to rebalance the workload and offer a greater variety of work to staff. Of the 120 staff working in Business Statistics, over 100 work in data collection, which has the most gains to be made from a successful transformation.

3.2 CSO 2020

Corporate Quality Programme recommending the standardisation of processes and documentation to improve efficiencies.
3.3 European Statistical Code of Practice (ESCOP) Peer Review

The ESCOP peer review recommended a number of changes/improvements around sampling co-ordination, at present each business survey area performs silo processes when sampling.

3.4 Central Business Register

CSO has a central business register however due to historical and practical issues a number of survey areas take copies and create local survey registers. This leads to numerous similar processes being performed in multiple areas to update and maintain these local registers.

3.5 Online Data Collection Portal

CSO would like to enhance the experience of respondents in providing data for our surveys. In modernising how we collect data, the absence of a single CBR prohibits the development of an on-line data portal.

3.6 User Needs

Change how we process our data to deliver high quality data to our users, creating efficiencies to allow more scope for new products e.g. Brexit and allow us to respond quickly to events. One of the most important demands is to stay relevant and CSO like other NSI’s are dealing with a changing landscape and challenges such as globalisation. CSO aims to create efficiencies allowing for greater capacity to enable us to collect new data or use administrative data for new products and add more value.

3.7 Use of Diverse Legacy IT Systems

There are too many IT systems in operation, many of which perform similar processes and require significant resources to maintain. BST aims to move away from these local silo systems, eliminating some and reducing the number in operation.

3.8 Cost

While difficult to estimate the cost savings resulting from the programme it is expected through efficiencies that fewer resources will be required to perform existing processes. We estimate that a saving of 10% will be delivered resulting in staff being redeployed within the office or performing new activities within Business Statistics such as profiling, enforcement or new statistical products.

4 Principals to be Applied

In setting the scope of the BST programme we carried out a ‘blue skies’ exercise using the balanced scorecard and focussed on activities which will add greatest value to our

---

key stakeholders i.e. staff and users. While the temptation and ambition was there to ‘boil the ocean’ previous experience has thought us to be more realistic rather than over optimistic. During the course of debate we asked ourselves numerous questions such as how big? How long will it take? When we will know we are finished? What does success look like? Do we have the resources and skillset to transform successfully and what should our governance structure look like? In asking ourselves these questions we derived the following principals to be applied to our transformation process

4.1 Staff Engagement

The buy-in of staff working in the two divisions is critical to the success of the transformation and therefore they were included from the beginning of the programme. Staff was first informed of the transformation at a town hall exercise where the management board presented the future vision for Business Statistics data collection and dissemination. The heads of the two divisions then held presentations/workshops with their staff to discuss goals and alleviate any concerns.

A study visit was arranged for June to the Office for National Statistics UK (ONS) whereby the transformation programme managers asked for volunteers ensuring that the research team was a mix of all grades from both divisions. This enabled staff to focus on issues and topics that would directly affect their day to day work. Before the study visit a number of workshops were held with all staff from the two divisions to examine what the aim of the research visit should be, what questions should we ask, what systems/processes would we like to see etc. On return from the visit, presentations are to be delivered by the research team to all staff on their experience at ONS and any key findings we can implement into our transformation.

In addition to the workshops there are regular meetings with statisticians to facilitate and encourage their input into the future structure. Key goals and objectives were discussed and the Statisticians and Programme managers separately derived what they thought the future structure should look like. Fortunately both structures were very similar and discussions are ongoing into producing the final vision.

4.2 Centralise and Standardise

In examining current processes for the future structure the aim is to centralise and standardise where possible to create efficiencies and eliminate repetitive tasks.

4.3 Single Point of Contact

Create specialisation and subject matter experts so that users and respondents can have an improved experience in dealing with CSO.
4.4 Value Added V Non-value Added Activities:
Examine our processes and focus on those which add value to our outputs. For example editing, we are unsure of the value it really adds to our processes and quality. Can we edit less and redirect our efforts to edits that have most impact on the quality of our data.

4.5 Structure First
Establish the vision for the future structure and processes before allocating people to roles. This is important to achieve a fairer distribution of work consistent with our principles above.

5 Objectives of BST
The key objectives of BST were agreed as follows:

5.1 User Demand Analysis and Implications for How We Do Our Business
This involves meeting users more systematically, creating more additional and more relevant products, managing response burden and examining the further use of administrative data.

5.2 More Integrated Structures
Move away from the existing silos of STS and SBS divisions. Merge the two divisions to balance workload and review the distribution of work amongst statisticians. The key goals of the new structure is the specialisation of skills, more automation leading to less repetitive work on processing and focusing on activities which add value. Under the current structure workload is divided based on periodicity rather than themes or subject matter experts, this prevents a single point of contact for our users and respondents. For example a user/respondent of our construction surveys will have multiple points of contacts for queries etc. depending on the periodicity of the survey. Under the new structure users/respondents will have an enhanced experience with a single point of contact, processes will be more centralised and co-ordinated and with greater use of administrative data, response burden will reduce.

5.3 Establish a Profiling/Medium Cases Unit
The Irish economy is highly concentrated with the largest companies dominating a number of business and economic indicators. CSO has a Large Cases Unit (LCU) who deals directly with the top 60 companies and collect data for all CSO surveys from these companies. LCU hold regular onsite visits/meetings with these companies developing a positive relationship to enhance their experience in responding to CSO surveys and educating them in terms of the importance of their responses and completions of forms. It is envisaged under BST to create a profiling unit for medium
sized firms, examining the next tranche of companies to improve the quality and coherence of our data. Due to the concentrated nature of the Irish economy certain enterprises are required to complete multiple surveys. Through establishing the MCU area, we hope to enhance the data collection process of such enterprises through improving processes and a single point of contact.

5.4 Migration of Silo Systems
At present silo systems exist across the two divisions e.g. SPROCET used in the production of our industry statistics. The programme aims to eliminate some of these systems, centralising our processes on the existing Data Management System (DMS). As mentioned previously we also aim to create a central business register removing the many silo registers in use in the office.

5.5 Research With a View to Change How We Conduct Core Statistical Activities
A methodological resource will be examining the current methodology and processes and investigating a number of topics which we believe will add the greatest value to our statistics. These include:

• Selective Editing - asking the question are we over editing and what value are getting for our current editing efforts? Can we edit less? We believe that in editing less we will reduce the number of queries, thereby reducing burden for respondents.

• Non-response Management: investigate imputation methods and the use of administrative data for non-response

• Administrative Data – Examine the potential use of administrative data as a replacement for some surveying and imputation. Should we survey less and model more using administrative data to again reduce burden?

• More Centralised and Co-ordinated Sampling – under current structures there is a variety in terms of who performs the sampling processes, how we sample, can we reduce burden for enterprises in particular smaller enterprises.

5.6 Business Register Process Improvement
Identify the obstacles to the focal use of the business register in CSO and also what if any changes are necessary to accommodate future change in how CSO collects data from enterprises i.e. e-data collection/portal.

6 BST Programme and Sub-Projects
The BST programme consists of four subprojects derived from the key objectives outlined above. The four projects are as follows:
6.1 Project A – Merger of the STS and SBS Divisions

The deliverables of project A include:
• Elimination of peaks and troughs
• Dedicated Data Collection and Releases and Publication (RAP) units for specialisation and efficiency gains as well as quality improvement
• Better respondent management
• New structure accommodating new needs

6.2 Project B – IT Systems Migration for the Industry Business Surveys

The deliverables of Project B include:
• Surveys successfully migrated to new platform of Data Management System (DMS) and Sprocet is shut down
• Savings for IT when Sprocet is removed and general efficiency gains

6.3 Project C – Business Register Development

The deliverables of Project C include:
• Reasons for existence of local registers established
• Recommendations on prioritised elimination of local registers
• User needs re Business Register established including on-line portal etc.
• Central Business Register developed 2018+
• Medium Cases Unit established and adding value

6.4 Project D – Re-engineering

The deliverables of Project D include:
• Examination of using more tax data in lieu of surveys completed to reduce burden
• Survey post-outs reduced/more use of modelling for some enterprises
• Examination of the value add of editing in enterprise statistics leading to efficiency gains and burden reduction

7 Eyes Wide Open

CSO are aware of the many challenges and risks involved in our BST programme. We have discussed these at length and are aiming at putting in measures to mitigate these risks. We are fearful of the risks we are facing but are embracing our role as risk managers to make BST a success. The programme managers are to be very open and transparent in our planning and various other activities during the transformation. We
are giving significant consideration to the governance of the project and in choosing which the best governance model for the programme is. We haven’t figured this out yet as we are still at the early stages of planning but it is important that we get the model right. Poor governance has been the downfall of many transformation initiatives.

A new initiative we undertook was a Project Initiation Document (PID) reconstruction review. This involved BST programme managers discussing the transformation PID with a team of experienced large scale project managers from various areas in the office, from both statistical and support services sections. It was highly beneficial in understanding why we are doing BST, its main objectives and the challenges and risks it presents. The outputs of the discussions are being used in drafting the planning documentation for the transformation programme.

The key risks identified to manage include:

7.1 Dedicated Resources

A key lesson learned by CSO from previous large projects was the importance of dedicated project resources. It is unrealistic to expect a programme of this scale to achieve success with staff working on it in addition to their business as usual activities. A key message sent by BST programme managers to CSO Management Board was not to mix business as usual with change and that dedicated full-time resources to a programme of this scale is critical to its success. In planning the BST programme, a number of staff of all grades from both divisions went on a study visit to the Office for National Statistics (ONS) UK and some also participated in a data collection collaboration workshop with the ONS and Australian Bureau of Statistics. This was very beneficial in discussing the challenges of transformation projects and the need for dedicated resources was identified as a key factor by all organisations. Personal responsibility is essential to any transformation i.e. “it must be someone’s job” and communication of these responsibilities must be very clear. Furthermore these responsibilities must be reinforced by senior managers who as sponsors must deliver a strong commitment to change.

Dedicated resources have been allocated to the project consisting of two Statisticians from methodology and the business area. We have also been allocated a dedicated project manager for the merger of the two divisions. This is a key role in the project and we requested someone with a particular skillset considering the level of change management involved. In selecting this resource we identified an individual with significant human resources experience but who had also worked in the Business Statistics data collection unit (DCU). As the DCU will see the largest change in their work practices resulting from the merger, it was important to choose someone who had the knowledge and skills to gain buy-in from the staff.
7.2 Business as Usual
The assignment of dedicated resources is even more critical as the ‘Business as usual’ is also undergoing change due to new regulations such as the Framework Regulation Integrating Business Statistics (FRIBS²), the globalisation debate affecting Business Statistics, rebasing, new user requirements etc. There is also ongoing corporate change with new quality management structures being introduced, changes in governance and other statistical and IT areas undergoing their own transformation. Business as usual is one of the biggest risks presented to any project in that when the pressure increases, staff naturally resort back to the day to day activities as these tend to have set deadlines under regulation. As BST programme managers this is one of the risks we have all have experienced which made us determined to not commence our transformation journey until the dedicated resources were assigned.

7.3 Timing
The timing of the implementation of change will be critical. We will need to set priorities and be aware of the window of opportunities in particular for the annual structural surveys. Projects within the transformation programme will be set up for short durations using the agile approach. This is important in terms of keeping momentum for a multi-year programme. Staff and project members need to see milestones being achieved along the way.

7.4 Hybrid Structure
It is likely that a hybrid structure will be in place during the migration to the DCU/RAP set up. With a programme of this scale it is too risky to take a big bang approach however the hybrid structure will bring its own set of challenges.

7.5 Key Staff
A significant lesson CSO has learned from previous project is that key project members need to remain constant. Projects of this nature have steep learning curves and if team members don’t remain static for significant periods of time, the pace of change if affected.

8 Conclusion
Although the Business Statistics Transformation programme will be challenging and is not without risk, we believe we have the skillset, experience and enthusiasm to face the challenges ahead. I would welcome input and discussion at the UNECE conference and am especially eager to learn from the experiences of other National Statistical Institutes who have faced similar challenges.

² http://ec.europa.eu/eurostat/about/opportunities/consultations/fribs