

#### On the Way of Modernization: A Review of I.R. Iran's Official Vital Statistics from the GSBPM Point of View

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#### Abstract:

Modernized official statistics agencies are the core wheels of general planning, since they provide accurate figures of the population for decision-makers to learn the needs, observe the processes, and measure the outcomes, based on data that are collected inclusively, analysed scientifically, and disseminated informatively. According to the Fundamental Principles of Official Statistics (UNECE, 1994), such a modernization is hardly achievable without generic statistical business process in place. Located at the cross point of Civil Register (CR) and ID Management systems, Bureau of Demographic and Migration Statistics (BDeMS), the responsible agency for Vital Statistics (VS) in I.R. Iran, managed to implement a standardized process for modernizing VS system, based on GSBPM, in 2017. According to the levels 1&2 of the GSBPM and the 3rd revision of the “Principles and Recommendations for a Vital Statistics System”, the process started by revising the set of “needs” of users that should be met. All available communication channels, from SMS and phone calls to different social media and web-based mailbox, were exploited to access the widest possible range of contacts. Rearranging the “workflows” with consideration of modern management methods was the next step, which also engaged the widespread capacity of local experts of the “National organization for civil registration (NOCR)” to speed up the process of standardization across the country. Designing new “output” frames for a variety of media, such as multi-media products, mobile application, and electronic and paper-based publications was a further step that improved public access to official vital statistics. Evaluation of the processes is the current step which is partially performed, generally based on the extent of feedback arrived to the agency, from users, managers, and decision makers. This paper describes these activities in detail and sums up the pros and cons of each step according to the mentioned standard. It also briefly expresses recent actions performed to develop “survey at registration time”, as a novel sample survey method to gather more UN recommended characteristics of vital events. While the agency is an official part of the two other basic registers (population register and family register), the potential effects of implementation of GSBPM to these registers is finally discussed. According to ESCAP's Collective Vision and Framework for Action, this paper provides facts in the action area D: "Modernizing statistical business processes".

**Keywords:** Standardization; CRV SID; Survey at registration time; Multimedia products

#### 1. Introduction:

Bureau of Demographic and Migration Statistics (BDeMS), has a specific position: On one hand it is located at the cross point of Civil Registration (CR) and ID Management systems (NOCR), and is the responsible agency for Vital Statistics (VS) in I.R. Iran; On the other hand, it is set as the focal point for coordinating with the ESCAP secretariat and development partners. Thus, according to its impressive role in the modernisation process of the I.R.Iran Vital Statistics and Civil Registration systems, BDeMS managed to implement a standardized process of modernization to improve VS system, extend CR system, and develop the Population Registration (PR) system.

The vision of BDeMS is: To be a Knowledge-Oriented agency to produce, analyse and disseminate vital statistics; As a part of CR and ID management systems, to satisfy statistical needs of these systems; To increase the added value of the integration of the three systems under the National Organisation for Civil Registration, Vital Statistics and ID management (so-called NOCR, also known as NOCRV SID), and in relation to National Statistical System (NSS).

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To do so, the GSBPM standard [1] is considered as a flexible framework, extendable to all components of the NOCR, which unifies statistical terminology across the organisation and enables the operational integration of the CR, VS and ID management systems. A set of national and international standards are also selected to support the process [2-5].

This paper mainly reviews performed actions from the GSBPM point of view: Section 2 describes the methodology and the types of official references. Section 3 introduces the set of actions performed and outlines the results. Finally, Section 4 sums up the achievements at the administrative level and draws a vision of the process of modernization in I.R.Iran CRV SID. A timeline of the main actions is represented in Appendix 1.

The 5<sup>th</sup> version of the GSBPM is used for referring to the components of the standard.

## 2. Methodology:

This paper sketches out the new approaches employed in the current statistical business process model in I.R. Iran vital statistical agency, to improve the quality, trustworthiness, and value of the vital statistics. It is a descriptive study, based on the experiences of BDeMS, as the canonical point of the national vital statistics system.

## 3. Result:

From the GSBPM viewpoint, the process of modernization in I.R.Iran's vital statistic system set out by considering over-arching processes. *Legal framework management* and *strategic planning* were the most important processes to be considered. While there is sufficient legal basement<sup>1</sup> in place to support National Organization for CRV SID to produce and disseminate vital statistics [6], but in order to properly manage the advancement of strategies, the organization needed to be transparently determined as the administrative Population Registrar. This aim followed with a high priority and enacted by the Supreme Council of Statistics, in Sept. 3, 2018.<sup>2</sup>

Afterwards, the process followed in level 1, by understanding the current procedures and revising them in accordance with the 8 phases of the standard (see appendix 1 for a timeline of phases):

- To *Specify Needs*, BDeMS collected all types of current requests for statistics and products. Different types of users with various needs showed that the spectrum of needs should be revised. Lack of supporting metadata and public misunderstanding of some demographic measures were of the most important needs. Availability of data and products to whom usually left behind, including users such as students in remote towns and individual experts interested in vital statistics, were other types of needs. Totally, the public need for being more aware about statistics and be more familiar with official statistics concepts, considered by BDeMS as the first need that must be met.

Thus, various kinds of media were planned to be employed to increase public access to the statistics. In addition to SMS and telephone calls and web-based mailbox, all kinds of social media such as text messengers, multimedia sharing channels, and communication groups were exploited to access the widest possible range of contacts. Current challenge in this phase is to encourage public users to be more demanding about statistical knowledge.

- BDeMS had to satisfy the needs and manage feedback form all newly accessed contacts. This necessitates simultaneous focus on the *human resource management* and *organisational framework management* - the two other over-arching process. Use of the widespread capacity of local experts of the NOCR –who are also one of the most important groups of users- to address new users, specify their needs and reflect their ideas, was the new working arrangement that extended coordination and accelerated the process of modernization. They were also free to take part in (online) conversations about other phases, such as *Design*, *Collect*, *Disseminate*, and *Evaluate*, as will be discussed later.

This new working arrangement, also improved some usual workflows in NOCR, such as annual assessment projects for birth and death registration coverage, registration of causes of death based on ICD, etc. Another capacity of this group of experts, is their ability to create a network of interviewers

<sup>1</sup> Civil Registration Law; Article 1. Par. G.

<sup>2</sup> Enactments of the 57<sup>th</sup> session of I.R.Iran's Supreme Council of Statistics, Sept. 3, 2018.

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for data collection, that now can be relayed on in *Build* and *Collect* phases. However, there is still obstacles to satisfy some local authorities to let this capacity to be fully employed.

- The new data collection methods are designed based on the capacity of the group of experts. In a recent survey (which is described in next session), workflow management and data collection were partially done by this group, under supervision of BDeMS. This method is still under evaluation for strengths and weaknesses.
- According to the specified needs, as described above, BDeMS adopted two main *dissemination strategies*:

First: to be descriptive and clear in reports and tables; that is, to describe any measure and method used in the product, to clearly address possible lack of data, and to originate possible mismatch in tables. In other words, to support the product with enough metadata to minimize misunderstandings, and to ensure that the statistics describe what they intended to (*Metadata Management*).

Second: to be concise and attractive in charts and graphics; that is, to be as simple as possible while being informative, in a way that draws attention right into the information it presents.

By strictly following these strategies for dissemination, BDeMS and the group of experts could gradually make important changes. On one side they succeeded to correct some statistical misunderstandings, such as the widespread misuse of the “marriage per divorce ratio” as an indicator for the spread of divorce, which is now healed and the public media are now educated and bound not to use it in demographic reports; On the other side, simple annual tables on datasheets are reformed to infographics and motion-graphics, and annual tables are now enriched with descriptive articles and analyses. An impressive try to meet the needs of users, are the annual reports about “motherhood”, since 2107. The report which is published in celebrating national Mother’s Day, projects the figure of motherhood in I.R.Iran through vital events statistics, from marriage to maternity, parity, and other events up to end of life. The collection is widely welcomed by users and decision-makers.

- *Dissemination processes* were accordingly evolved. Output systems are developed and different softwares are now integrated to improve the quality of outputs. Various channels are also employed for various types of outputs: from publication in press, to social media and video sharing channels. A mobile application [7] is also developed to cover the needs of individuals who may need (mostly aggregated) data and articles, anywhere.

The main challenge for this dissemination reform is lack of well-trained staff among the group of experts and BDeMS itself. The need for related-trainings is a process that is still not seriously followed.

- *Evaluation* of methods and products, was a routine that is slightly changed during the modernization process. Annual assessment by NOCR evaluation office are still performed as usual. The only difference is that the group of experts are engaged in evaluation of statistical products by local offices. Evaluations and assessment of the whole modernisation procedure is still in progress.

#### 4. Discussion, Conclusion and Recommendations:

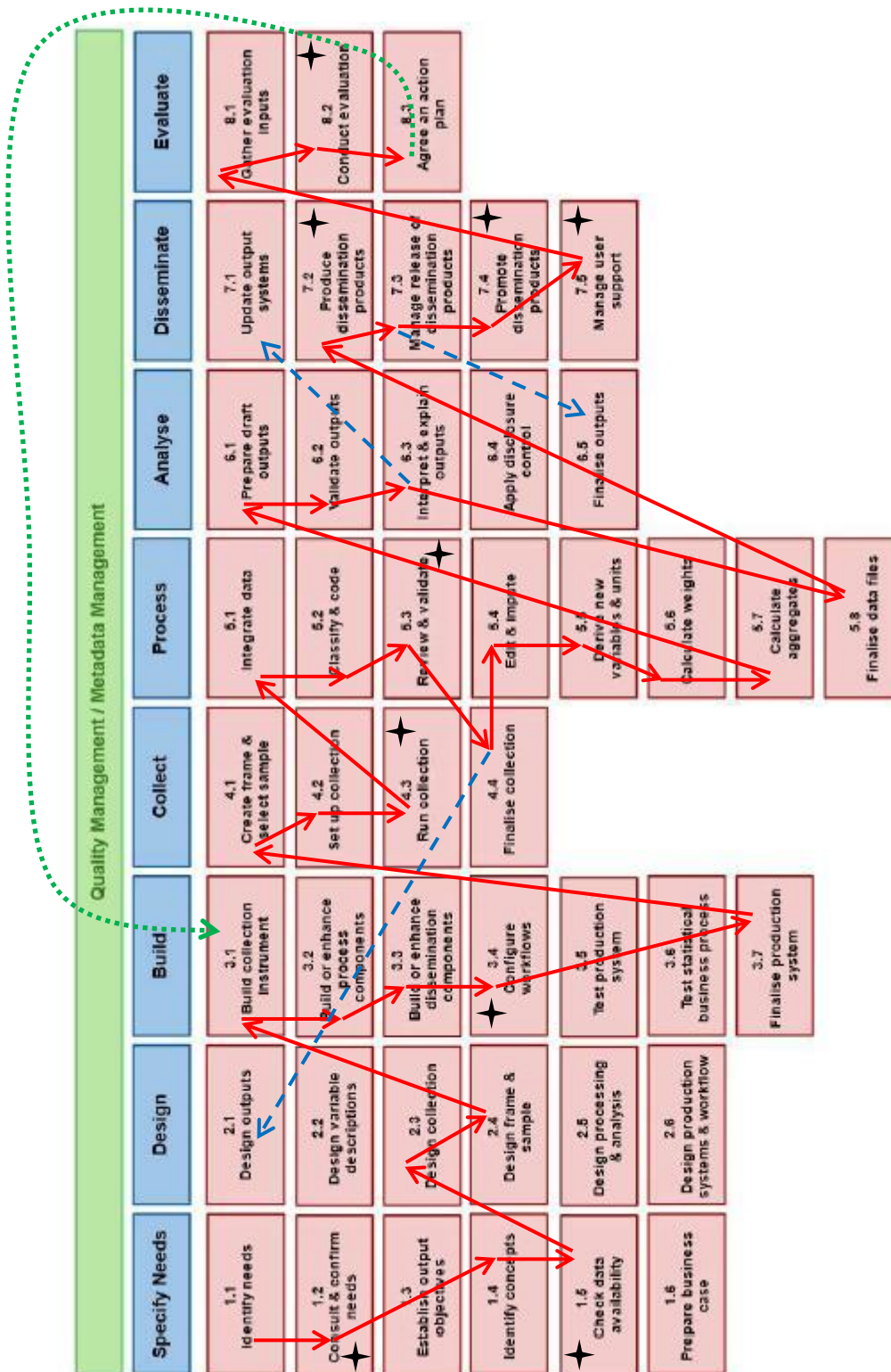
The general statistical business process model of modernization in I.R.Iran’s vital statistics system is discussed in previous section. According to this model, the workflow at 2<sup>nd</sup> level of the GSBPM for statistical products, is shown in Figure1. This structure is still under revision according to new evaluations and feedback form users. Through development of this model and experiences that proved the capacity of the group of experts, BDeMS planned to extend these experiences to a novel sample survey method, “Survey at Registration Time (SRT)”.

SRT is a recent data collection method which is now planned to be a routine, and - as authors know- is a novel sample survey method, at least in the region. The method highly developed to allow BDeMS to gather more characteristics of population. Based on the properties and constraints in the CR, VS and ID management systems in NOCR, this method can easily help the systems to gather more UN recommended characteristics of vital events. This also would help the developing PR system know its priorities.

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**Figure 1.** GSBPM workflow for vital statistical productions (the process is still under evaluation). Red solid arrow: main workflow; Blue dashed arrow: parallel activities; Green dotted arrow (curved arrow): recursion. Starred sub-process: group of experts are (partially) engaged.

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Briefly, SRT is a method that samples the incoming transactions to an administrative registrar, considers the people involved in the transaction as respondents, and collects additional data about them. Since the registrar continues working, the survey can be continued periodically, be developed gradually, and be conducted in any desired direction, to achieve more details about the population. Such a method however, highly depends on the trained staff in the registrar. On the other hand, it improves organisational experience and paves the way for establishment of a complete population registration that covers all data requirements.

The first test of SRT in the vital statistics system in I.R.Iran, is a survey conducted by BDeMS in 2018, to collect complementary information about marriage & divorce events. BDeMS and the group of experts cooperated to collect some types of data about both events, which were not collected officially by any registrar before. This experience showed the abilities of SRT and revealed the limitations, especially in collection medium and data integration methods. As a result, NOCR and BDeMS are now setting up new data collection method which will also improves resource management across the organisation.

In addition to the achievements for the national CRVSID systems, BDeMS and the group of experts followed the prerequisites of a complete PR system at a higher administrative level, by playing active roles in Population Strategic Councils (PSCs). By the enactment of the National Social Council, in 2016, the PSCs have been organized in all provinces across Iran, chaired by respective governors with the participation of related executive bodies, provincial elites (with the coordination of the Elite Foundation), academicians, NGOs active in the field of population, and other stakeholders. Since NOCR local offices are legally responsible to conduct PSCs under supervision of BDeMS, the group of experts now play unique roles to contact and cooperate with all stakeholders, in order to rail the way for a complete Population Register system based on National Population Database (NPD)<sup>3</sup>. These experiences, in addition to that of the modernisation process, resulted in articles and demonstrative products, that firmed the position of BDeMS as the canonical office in the official vital statistics system in I.R.Iran.

Now, the Bureau of Demographic and Migration Statistics, can share the experiences with the whole NOCR, and not only impress the intra-organisational workflows, but also ease the inter-organisational coordination, especially with other components of the NSS. The vision of the BDeMS in this manner is the affirmed position of the CRVSID system in relation with other local and international official statistics agencies.

This paper briefly described the process of modernisation in the Vital Statistics System in I.R.Iran. It explains the general activities that enabled or updated each phase of the standard. It is also described how specific properties of the CRVSID system, as an integrated bundle of official statistics, could both accelerate the modernisation process and reap benefits of it.

#### Appendix 1

BDeMS started the modernization process based on GSBPM, by translating the standard and other related models and standards (especially GSIM, CSPA), in 2016. Working on definitions and concepts was the next step, and then is followed by prioritizing the over-arching processes. Activities followed in two levels:

First: at the administrative level BDeMS actively negotiated to persuade decision makers about the role of the NOCR in a modernized NSS, which resulted in legal supports in 2017 and 2018, in enactments of the Supreme Council of Statistics. Afterwards, BDeMS took part in workshops and workgroups of the NSS modernisation program, in 2019, which affirmed the position of the NOCR in relation to NSS components.

Second: across the NOCR, local working arrangements re-defined to enable the capacity of the group of experts, late in 2016. Another over-arching process was planning to specify the public needs. This process mainly started in 2017 and now is continued.

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<sup>3</sup> NPD is the ID management database, enriched with the information about vital events of the individuals, in I.R.Iran.

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Sub-processes were gradually followed in productions since 2018 and the experiences have been routinely documented.

Evolving dissemination processes, was a stepwise procedure. It begins with evaluation of the human and technical resources in 2017. BDeMS also revised the design processes of annual national reports in 2017, and published the first vital statistical infographic. By reflecting the evaluation results to the group of experts, they run the process of modernisation in dissemination. Next step was the introduction of multimedia reports and well-designed descriptive booklets, in 2018. The group also extended the ideas, and this leads to the emergence of some other output formats. The pilot version of the mobile app was published in 2019.

Evaluation of the dissemination processes is delegated to the group of experts, through two consecutive years in 2018-19.

Evaluation of the whole process is now in progress, to draw the modernised vision of the national vital statistics system, by the end of 2020.

For a complete list of products see the BDeMS website<sup>4</sup>.

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<sup>4</sup> <https://www.sabteahval.ir/avej/Default.aspx?tabId=1497>