



دائرة الإحصاءات العامة
Department of Statistics

EU Twinning Project on Statistics in Jordan

Standardised production – introduction to GSBPM

1.3.6: Quality and metadata

Mission in Jordan 4th – 7th December 2023

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Introduction to GSBPM

- Generic Statistical Business Process Model
- Standard framework and harmonised terminology
- ...by describing and defining a set of business processes needed to produce official statistics
- Template for process documentation, for harmonising statistical computing infrastructures, and to provide a framework for process quality assessment and improvement
- The statistical business process model in Statistics Denmark is a Danish adoption of the joint UNECE, Eurostat and OECD generic statistical business process model (GSBPM) version 5.0, but we are now merging to 5.1



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Why GSBPM?

- Quality of statistical output depends on two factors:
 - The quality of the data from data providers (we can influence)
 - The quality of the processes by which we treat these data (in our control)
- Major efficiency gains can be seen when ‘best practices’ are applied and standardised datasets and uniform production procedures are used for similar tasks
- Frame for analysis and gradual improvement
- “It is difficult to improve something which is not described”
- A common process model can assist us with a common conceptual, methodological and organisational reference for describing, analysing and disseminating our statistical products.
- It provides a tool to ease and facilitate the training of new employees and at the same time to extract knowledge from experienced experts before it's too late.



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How to work with GSBPM

- For all statistics production activities:
 - Organise the filing structure according to GSBPM
 - For Quality reporting – relate SIMS fields to GSBPM phases
 - For guidelines – refer to GSBPM phases
- The phases 1-3 first and then phases 4-8
- Specify Quality indicators in each of the phases

- ▶ 1. Specify needs
- ▶ 2. Design
- ▶ 3. Build
- ▶ 4. Collect
 - ▶ 4.1 Create frame and select sample
 - ▶ 4.2 Set up collection
 - ▶ 4.3 Run collection
 - ▶ 4.4 Finalise collection
- ▶ 5. Process
- ▶ 6. Analyze
- ▶ 7. Disseminate
- ▶ 8. Evaluate



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STATIS
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Statistics Finland

The Generic Statistical Business Process Model

GSBPM 5.1

Overarching Processes							
Specify needs	Design	Build	Collect	Process	Analyse	Disseminate	Evaluate
1.1 Identify needs	2.1 Design outputs	3.1 Reuse or build collection instruments	4.1 Create frame and select sample	5.1 Integrate data	6.1 Prepare draft outputs	7.1 Update output systems	8.1 Gather evaluation inputs
1.2 Consult and confirm needs	2.2 Design variable descriptions	3.2 Reuse or build processing and analysis components	4.2 Set up collection	5.2 Classify and code	6.2 Validate outputs	7.2 Produce dissemination products	8.2 Conduct evaluation
1.3 Establish output objectives	2.3 Design collection	3.3 Reuse or build dissemination components	4.3 Run collection	5.3 Review and validate	6.3 Interpret and explain outputs	7.3 Manage release of dissemination products	8.3 Agree an action plan
1.4 Identify concepts	2.4 Design frame and sample	3.4 Configure workflows	4.4 Finalise collection	5.4 Edit and impute	6.4 Apply disclosure control	7.4 Promote dissemination products	
1.5 Check data availability	2.5 Design processing and analysis	3.5 Test production systems		5.5 Derive new variables and units	6.5 Finalise outputs	7.5 Manage user support	
1.6 Prepare and submit business case	2.6 Design production systems and workflow	3.6 Test statistical business process		5.6 Calculate weights			
		3.7 Finalise production systems		5.7 Calculate aggregates			
				5.8 Finalise data files			



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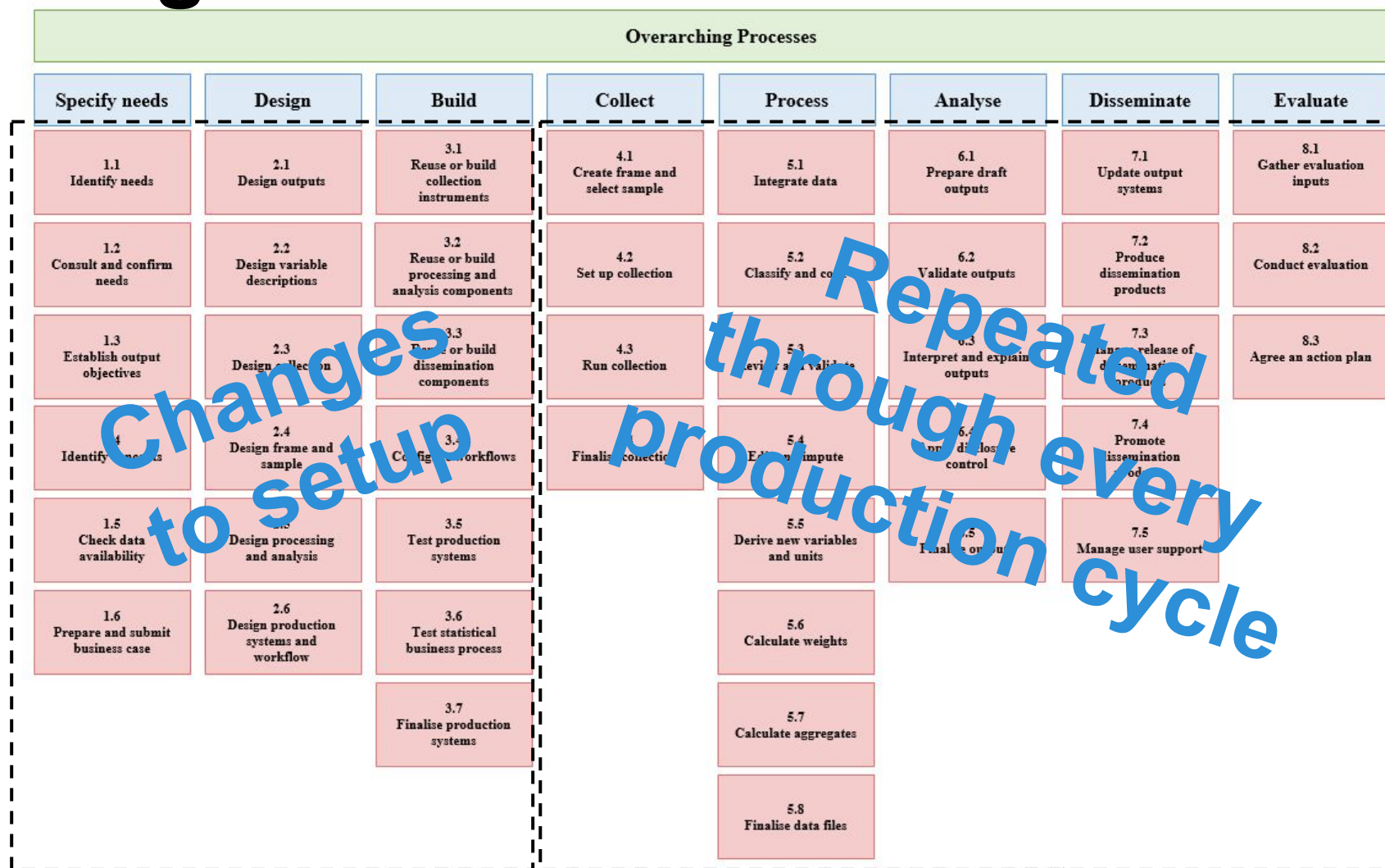


GSBPM - generic

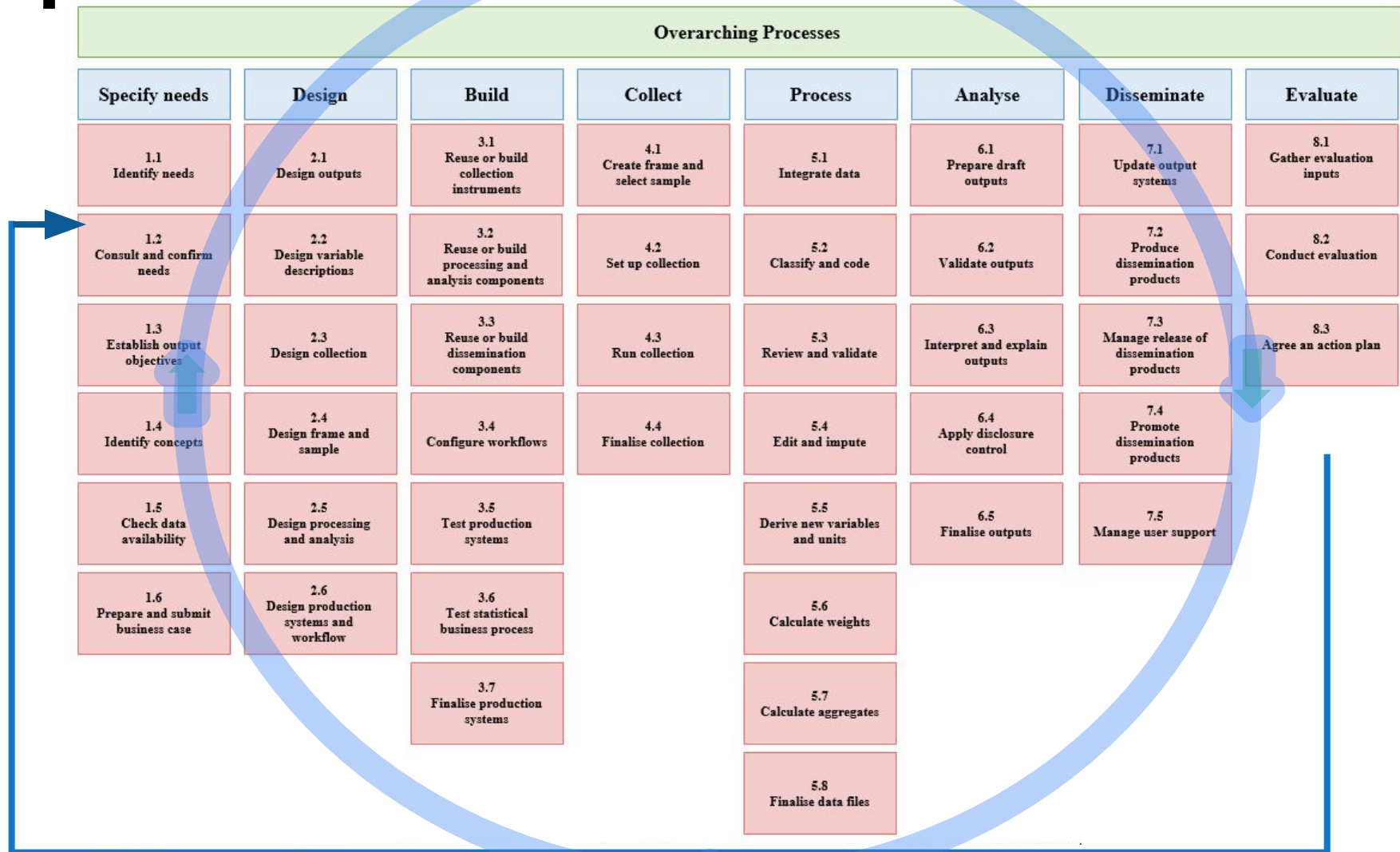
عمليات الشمول							
مرحلة التقييم	مرحلة النشر	مرحلة التحليل	مرحلة التشغيل	مرحلة الجمع	مرحلة البناء	مرحلة التصميم	تحديد الاحتياجات
8.1 جمع مدخلات التقييم	7.1 تحديث أنظمة المخرجات	6.1 إعداد مسودة المخرجات	5.1 دمج البيانات	4.1 إنشاء الإطار واختبار العينة	3.1 إعادة استخدام أوبناء أدوات الجمع	2.1 تصميم المخرجات	1.1 تحديد الاحتياجات
8.2 اجراء التقييم	7.2 انتاج منتجات النشر	6.2 التحقق من المخرجات	5.2 تصنيف وتكويد (ترميز)	4.2 الإعداد لجمع البيانات	3.2 إعادة استخدام أوبناء عناصر التشغيل والتحليل	2.2 تصميم أوصاف المتغير	1.2 التشاور وتأكيد الاحتياجات
8.3 الاتفاق على خطة عمل	7.3 إدارة عملية منتجات النشر	6.3 تفسير وشرح المخرجات	5.3 المراجعة والتحقق	4.3 تنفيذ عملية جمع البيانات	3.3 إعادة استخدام أوبناء عناصر النشر	2.3 تصميم جمع البيانات	1.3 ضع أهداف المخرجات
	7.4 ترويج منتجات النشر	6.4 تطبيق مراقبة الإفشاء	5.4 تحرير و اسناد	4.4 الانتهاء من عملية الجمع	3.4 تهيئة عملية سير العمل	2.4 تصميم الإطار والعينة	1.4 تحديد المفاهيم
	7.5 إدارة عملية دعم مستخدمي البيانات	6.5 الانتهاء من المخرجات	5.5 اشتقاق المتغيرات الجديدة والوحدات الإحصائية	5.6 حساب الأوزان	3.5 اختبار نظم الإنتاج	2.5 تصميم المعالجة والتحليل	1.5 التحقق من توافر البيانات
			5.7 حساب المجاميع	5.8 وضع الصيغة النهائية لملفات البيانات	3.6 اختبار عملية الأعمال الإحصائية	2.6 تصميم أنظمة الإنتاج وسير العمل	1.6 إعداد دراسة جدوى business case
					3.7 الانتهاء من نظم الإنتاج		



Understanding the model



Statistical processes - GSBPM

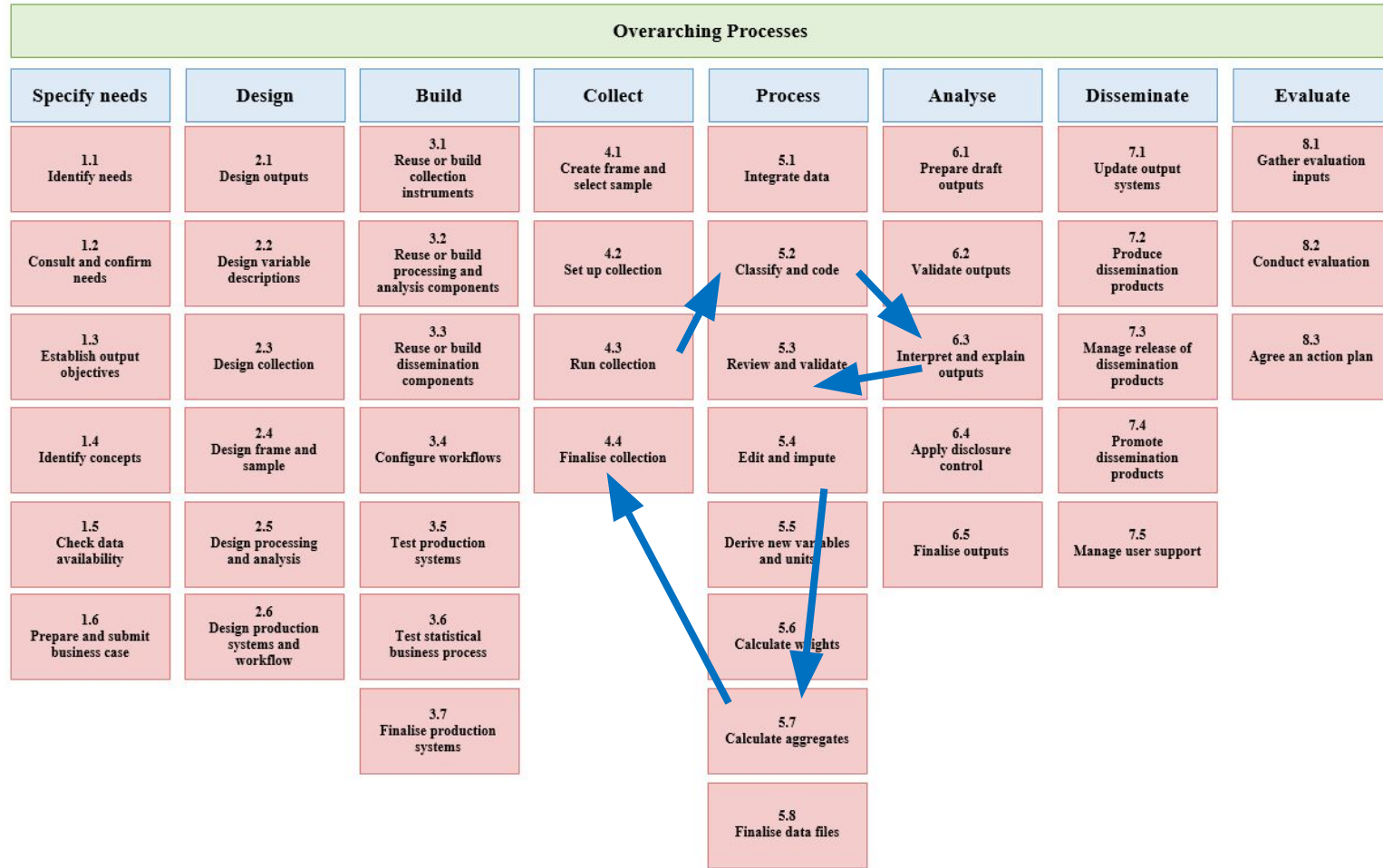


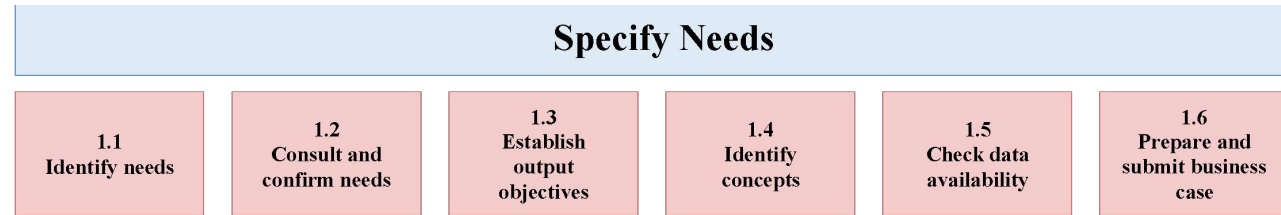
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Not a linear process

- GSBPM is not a rigid framework in which all steps must be followed in a strict order
- Some sub processes will be revisited a number of times forming iterative loops, particularly within the 'Process' and 'Analyse' phases



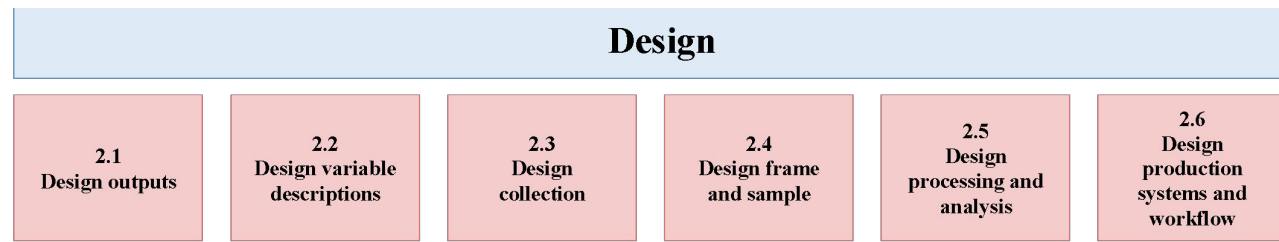


- This phase is triggered when
 - a need for new statistics is identified
 - feedback about current statistics initiates a review
- It includes all activities associated with engaging customers to identify their detailed statistical needs, proposing high level solution options and preparing business cases to meet these needs



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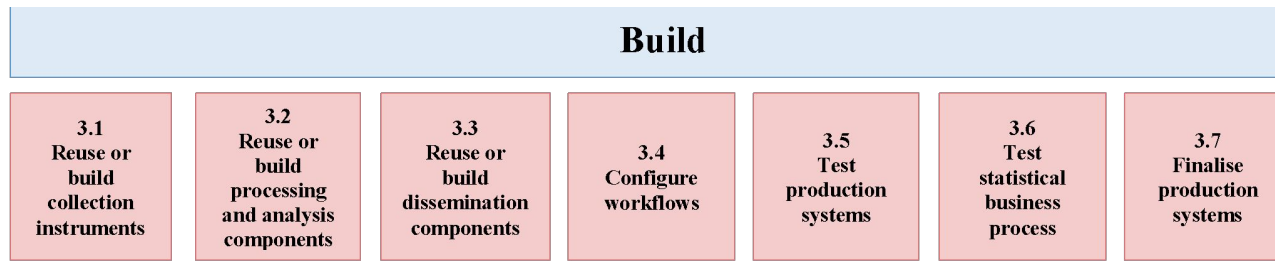


- This phase describes the development and design activities, and any associated practical research work needed to define the statistical outputs, concepts, methodologies, collection instruments and operational processes
- It includes all the design elements needed to define or refine the statistical products or services identified in the business case
- This phase also specifies all relevant metadata, ready for use later in the statistical business process, as well as quality assurance procedures



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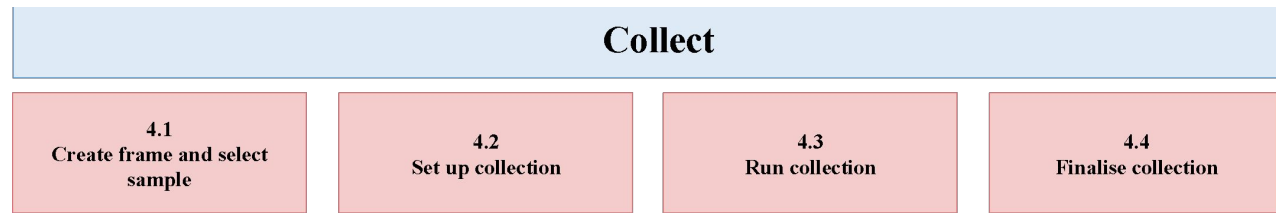


- This phase builds and tests the production solution to the point where it is ready for use in the "live" environment
- The outputs of the "Design" phase direct the selection of reusable processes, instruments, information, and services that are assembled and configured in this phase to create the complete operational environment to run the process
- New services are built by exception, created in response to gaps in the existing catalogue of services sourced from within the organisation and externally.
These new services are constructed to be broadly reusable within the statistical production architecture



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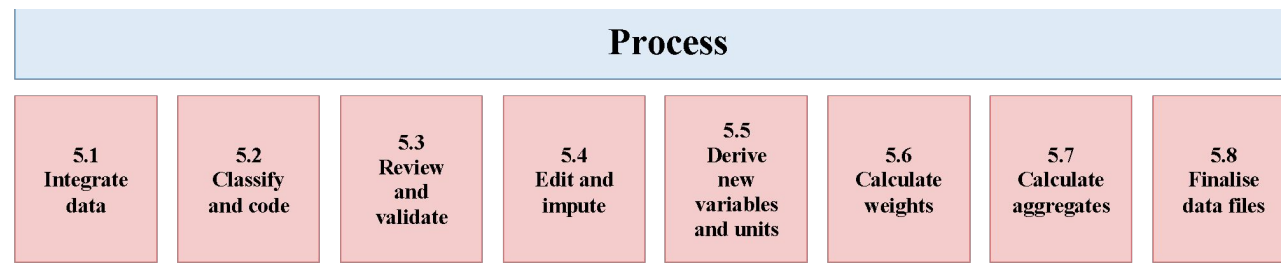


- This phase collects or gathers all necessary information (data and metadata), using different collection modes (including extractions from statistical, administrative and other non-statistical registers and databases), and loads them into the appropriate environment for further processing
- Whilst it can include validation of data set formats, it does not include any transformations of the data themselves, as these are all done in the "Process" phase
- For statistical outputs produced regularly, this phase occurs in each iteration



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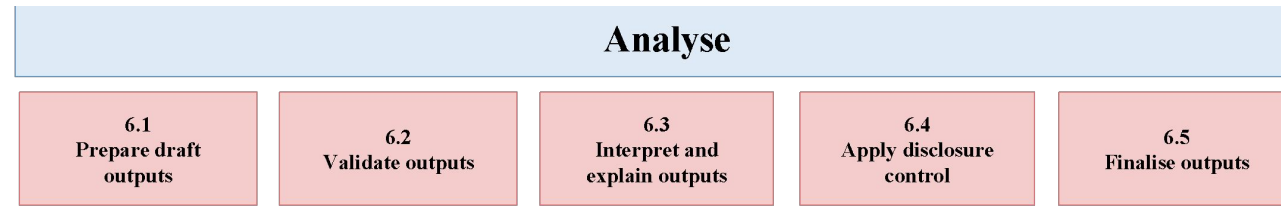


- This phase describes the cleaning of data and their preparation for analysis
- It is made up of sub-processes that check, clean, and transform input data, so that they can be analysed and disseminated as statistical outputs
- It may be repeated several times if necessary. For statistical outputs produced regularly, this phase occurs in each iteration
- The sub-processes in this phase can apply to data from both statistical and non-statistical sources (with the possible exception of sub-process 5.6 (Calculate weights), which is usually specific to survey data)



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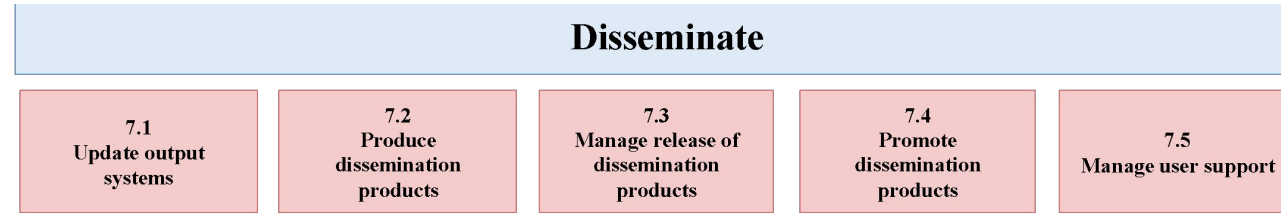


- In this phase, statistical outputs are produced, examined in detail and made ready for dissemination.
- It includes preparing statistical content (including commentary, technical notes, etc.), and ensuring outputs are “fit for purpose” prior to dissemination to customers
- This phase also includes the sub-processes and activities that enable statistical analysts to understand the statistics produced
- The "Analyse" phase and sub-processes are generic for all statistical outputs, regardless of how the data were sourced.



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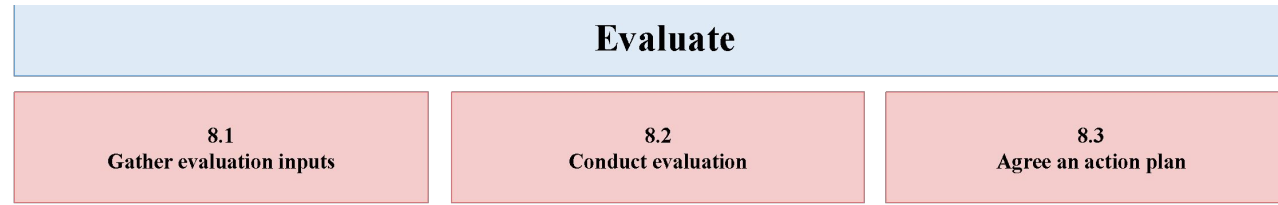


- This phase manages the release of the statistical products to customers
- It includes all activities associated with assembling and releasing a range of static and dynamic products via a range of channels
- These activities support customers to access and use the outputs released by the statistical organisation



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- This phase manages the evaluation of a specific instance of a single process, as opposed to the more general over-arching process of statistical quality management
- It logically takes place at the end of the instance of the process, but relies on inputs gathered throughout the different phases
- It includes evaluating the success of a specific instance of the process, drawing on a range of quantitative and qualitative inputs, and identifying improvements
- For statistical outputs produced regularly, evaluation should, at least in theory occur for each iteration, determining whether future iterations should take place, and if so, whether any improvements should be implemented



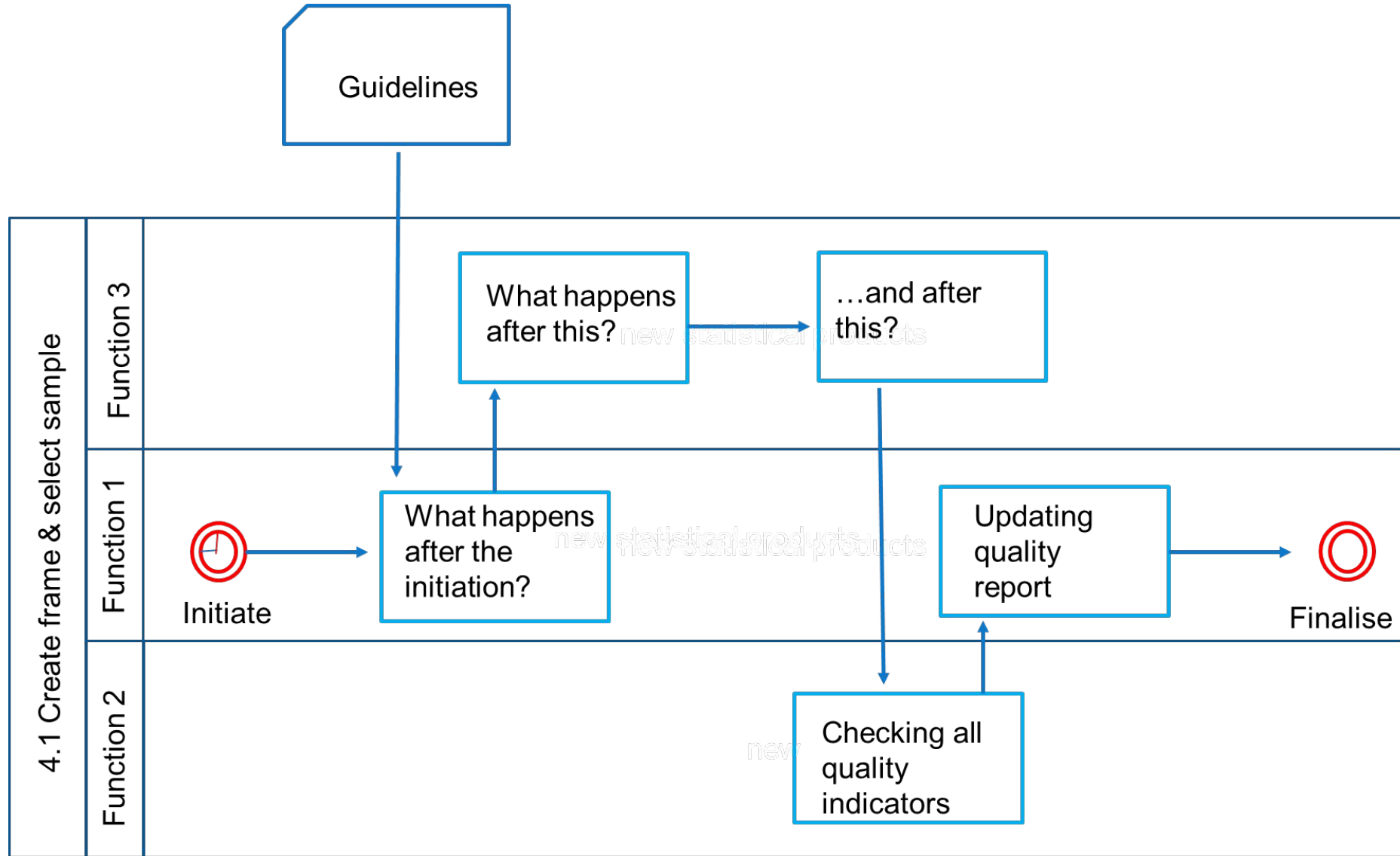
Existing statistical products - GSBPM

- Start-up – phase 4 – sub-process 4.1 – create frame & select sample
 - What initiates or starts this process?
 - Who or what functions are involved in the process of creating frame & selecting sample?
 - Is there a specific point in time? Is it after something else has finished? Is it ad-hoc? ...etc.
 - What happens after the initiation? What happens after this?and after this?
 - When/how is the creation of frame & sample selection finalised?
 - Are there guidelines to be followed?
 - Information for the quality report from this sub-process...
 - Quality indicators in this phase – which are relevant?

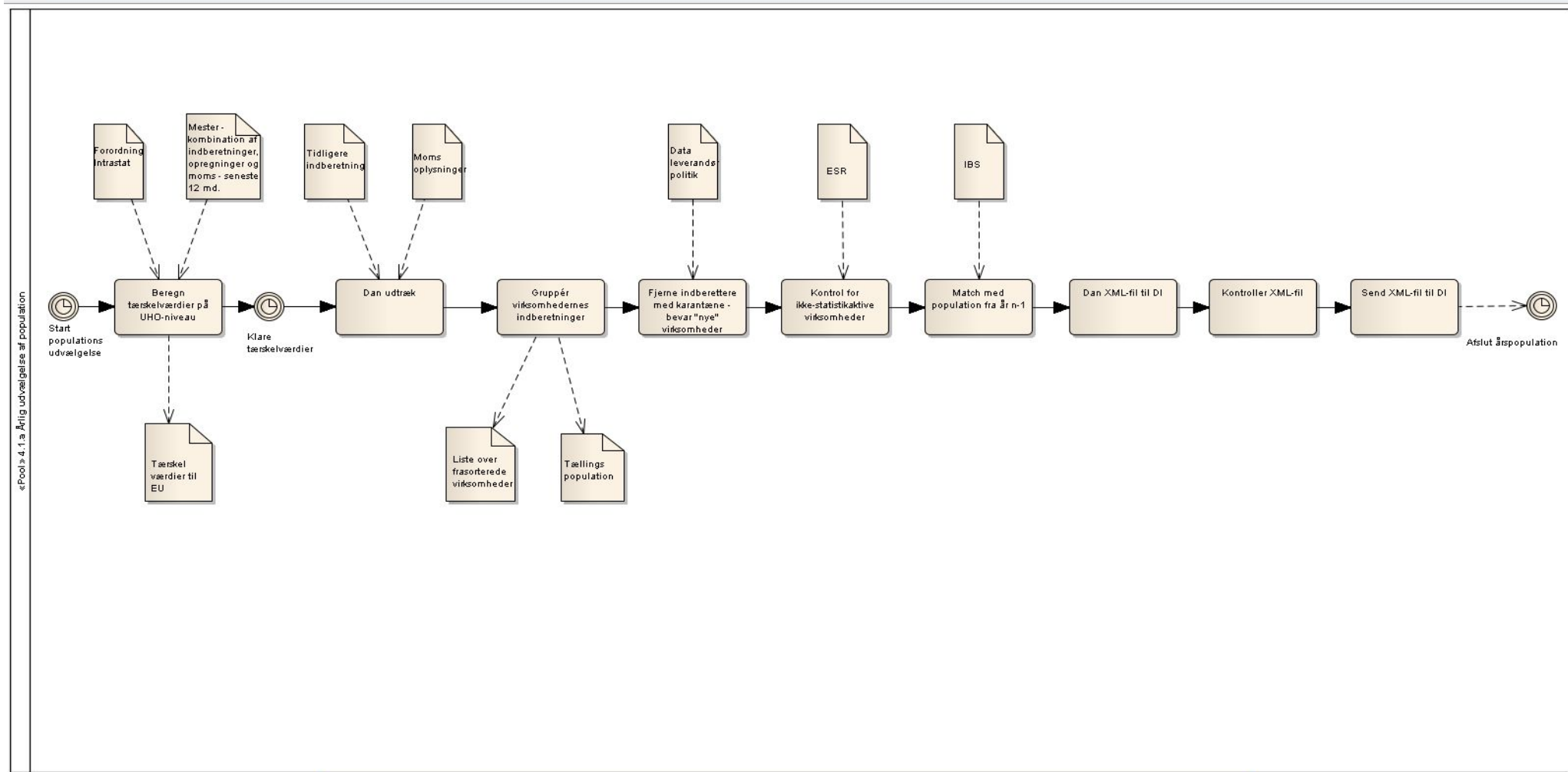


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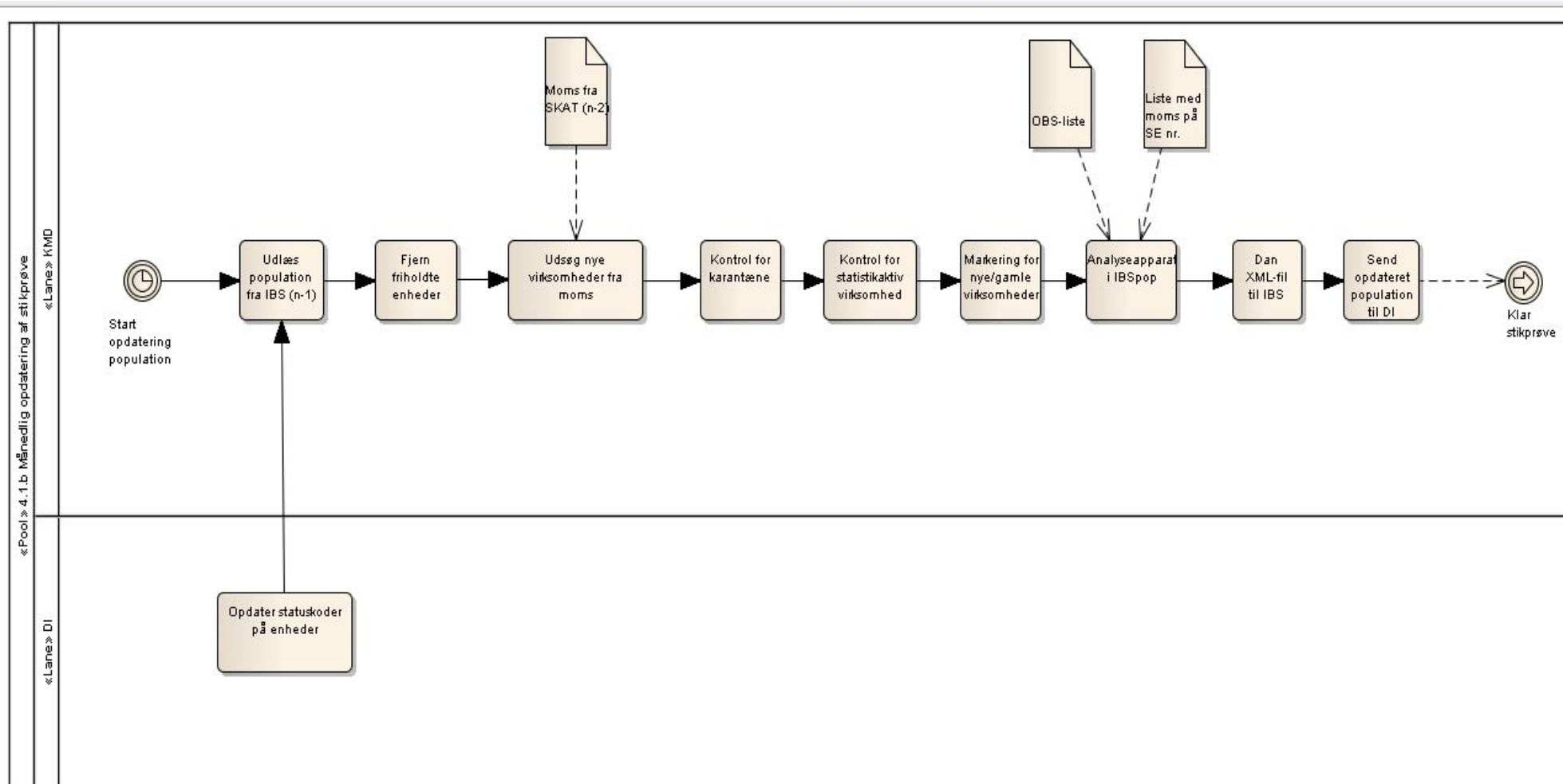




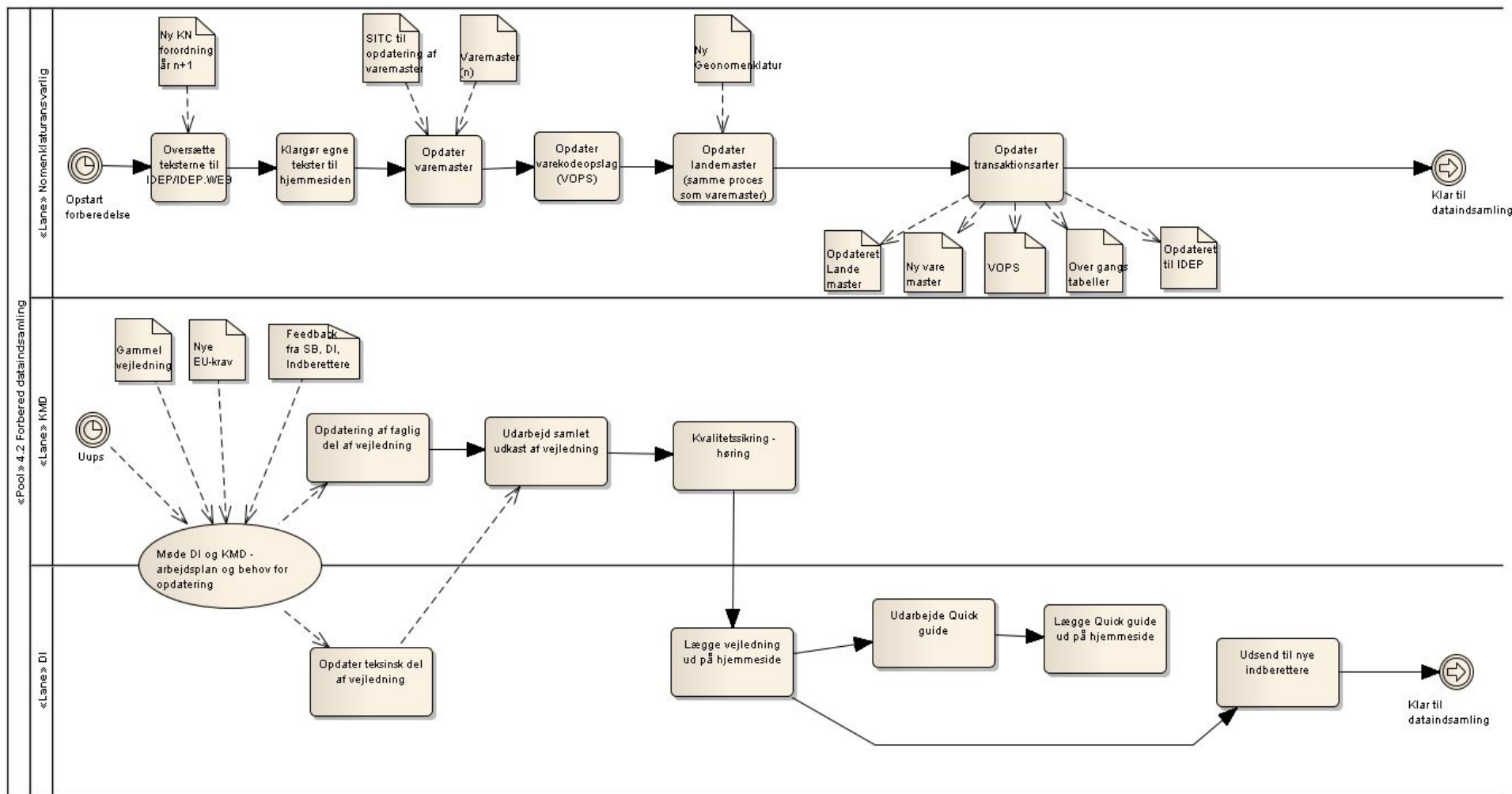
4.1 intra EU-trade



4.1 intra EU-trade



4.2 intra EU-trade



Quality indicators in the GSBPM

- Objective
- Quality indicators were developed for the Generic Statistical Business Process Model (GSBPM) with the aim of expanding the quality management layer for the GSBPM.
- Who
- A working group of the UNECE Modernization Committee on Standards
- Member for task team:
- Statistics Canada
- Eurostat
- Italy
- Turkey



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QI's for GSBPM

- Indicators were prepared only for direct surveys but extensions to administrative data and mixed sources are being undertaken
- Version 1.0 has been uploaded on the UNECE website (June 2016)



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**Thank you for your attention
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