The National Statistical Committee of the Kyrgyz Republic

GSBPM and Metadata
Kyrgyz-Norwegian Project

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The 2015-2019 Program for Improvement and Development of State Statistics of the Kyrgyz Republic:

The objective – Building a Comprehensive and Effective System for Quality Management

project implementation:

- Use of the Generic Statistical Business Process Model (GSBPM) in the statistical practice of Natstatcom of the Kyrgyz Republic;

- Systematization of available documentation linked to GSBPM;

- Introducing in Natstatcom the practice for quality assessment in view of the European Statistics Code of Practice (CoP).

Statistical Cooperation between Statistics Norway and National Statistical Committee of the Kyrgyz Republic

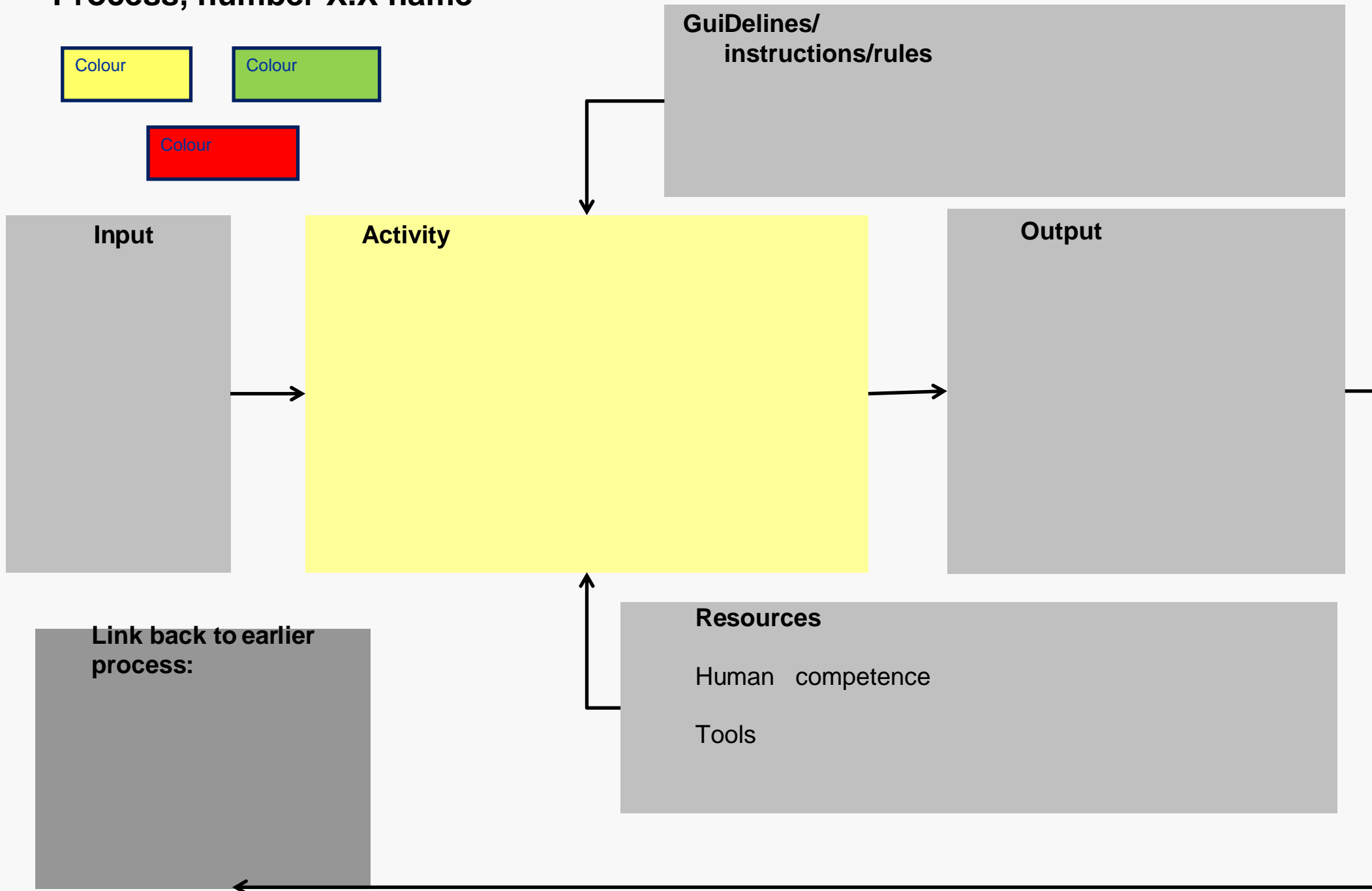## Organizational Development Component

Project on quality assurance

Project goal: Description of statistical processes and staff capacity building in quality assurance

Process, number X.X name

Colour	Colour

Colour

GuiDelines/ instructions/rules

Input

Activity

Output

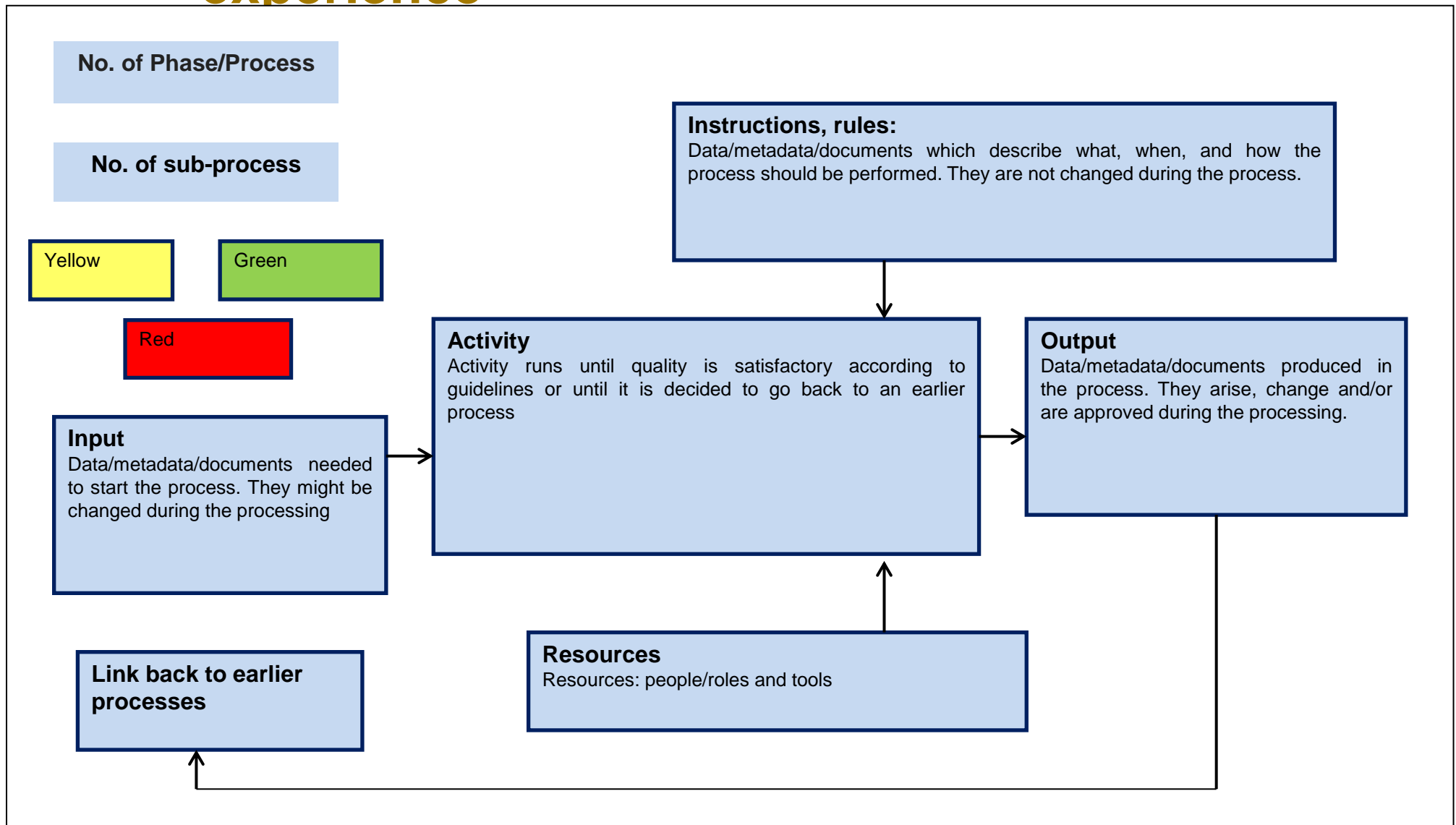**Link back to earlier process:**

Resources

Human competence

Tools

Definition of colours for level of standardization

- Green: Guidelines and standard tools exist and are used

- Yellow: Guidelines and standard tools are under development or developed but not widely used

- Red: Guidelines and standard tools neither exist nor are they under development

Implementation of GSBPM using the Norwegian experience

No. of Phase/Process

No. of sub-process

Yellow

Green

Red

Instructions, rules:
Data/metadata/documents which describe what, when, and how the process should be performed. They are not changed during the process.

Input
Data/metadata/documents needed to start the process. They might be changed during the processing

Activity
Activity runs until quality is satisfactory according to guidelines or until it is decided to go back to an earlier process

Output
Data/metadata/documents produced in the process. They arise, change and/or are approved during the processing.

Link back to earlier processes

Resources
Resources: people/roles and tools

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

Условные обозначения:

P — Место для стоянки автомобилей

$ — Обменное бюро

🚌 — Остановки автобусов и маршруток

▬ — Основные автомобильные пути

<-- в Город

в Город →

в Город →

Троллейбусная остановка: Троллейбус №4 Троллейбус №17

Продуктовые ряды

DeLuxe

Кож завод

Торговый центр "DeLuxe"

Место для стоянки автомобилей

Место для стоянки автомобилей

Склады

Склады Склады

Склады Склады

Туалет, Душ

Склады

Джунхай

5 проход
5 проход
4 проход
3 проход
2 проход
1 проход

Стоянка маршруток:
203 – Джал мкр
233 – Ахмединский р-н
234 – рынок Мадина
230 – Диагностика
352 – Асанбай мкр
226 – с. Орто-Сай
191 – ЖД вокзал

Продуктовые ряды

Ряд А3
Ряд А2
Ряд А1
Ряд А
Ряд А4
Ряд А5
Ряд А6
Ряд А7

Ковры

Форт

Китай

Кербен

Кербен

Европа

Евразия

31-32 ряд
29-30 ряд
27-28
25-26 ряд
23-24 ряд
21-22 ряд
19-20 ряд
17-18 ряд

8-9 Ряд
6-7 Ряд
4-5 Ряд
2-3 Ряд
1 Ряд

8-9 Ряд
6-7 Ряд
4-5 Ряд
2-3 Ряд
1 Ряд

8-9 Ряд
6-7 Ряд
4-5 Ряд
2-3 Ряд
1 Ряд

3 проход
2 проход
1 проход
0 проход

3 проход
2 проход
1 проход
0 проход

Кожа
Меха
Шубы
Шапки

ряд Б-1
Ряд Б-2
Ряд Б-3

-3 -4 ряд
-1 -2 ряд
0 ряд

9-10 ряд
7-8 ряд
5-6 ряд
3-4 ряд
1-2 ряд

9-10 ряд
7-8 ряд
5-6 ряд
3-4 ряд
1-2 ряд

9-10 ряд
7-8 ряд
5-6 ряд
3-4 ряд
1-2 ряд

9 ряд
7-8 ряд
5-6 ряд
3-4 ряд
1-2 ряд

ряд +1

Кербен

проход Кербен-1

Алканов и К (Алкан базары)

Гостиный двор

проход Гостиный двор

Брачный ряд

Обувные ряды "Железки"

Центральный проход

Стоянка маршруток:
258 – с. Маевка
233 – Ахмединский р-н
161 – Ош базар
123 – Ахмединский р-н
319 – с. Ново-покровка
371 – г. Кант
376 – г. Сокулук
432 – Таможня (Казахстан)
377 – Таможня (Казахстан)

Рынок автозапчастей Дордой

Алтын-Тоо рынок хоз. товаров и автозапчастей

Мурас-Спорт

Дордой Север

АЗС

Дордой Восток

Ак-Суу

Склады Склады

Объездная дорога →

Объездная дорога →

<-- Объездная дорога

A pilot statistical product "Dordoy Market Survey"

1. Specify needs

1.1. Determine needs for information

Colour	Colour

Colour

Input
- Statement of the Government
- Task set by NSC top management
- the World Bank publication "Skeins of Silk: Borderless Bazaars and Regional Integration in Central Asia

Instructions, rules

Activity
Contribution of Dordoy market in GDP
Analyze users' needs in specific statistical data:
- Turnover;
- Infrastructure of the market (café, containers, hair-dressing saloons, banks etc.);
- One-time survey;
- Searching stakeholder (public authorities) that could be engaged in data collection
- Coverage

Output
Determine:
- specific statistical data on economic entities
- need for conducting Dordoy market survey

Resources
- Human resources: economists, statisticians

Link back to earlier processes

Types of objects and services in the Dordoy market

1 Containers
2 Shops
3 Pavilions
4 Kiosks
5 Restoration of clothes
6 Pharmacies
7 Cafes, canteens
8 Fast-food outlets-(fixed)
9 Fast-food outlets (delivery, carts)
10 Hotels
11 Banks
12 Micro-credit offices
13 Pawnshops
14 Exchange offices
15 ATMs
16 Legal services
17 Technical maintenance of motor vehicles
18 Tire filling
19 Footwear repair shops
20 Dry-cleaning
21 Laundry
22 Notaries
23 Photo salons
24 Photocopy shops

25 Touristic firms, agencies
26 Packing shops
27 Slot machines
28 Billiard rooms
29 Hair-dressing saloons
30 Saunas, shower
31 Medical centers
32 Dentists
33 Gynecologists
34 Parking lots
   - for buses
   - for public mini-buses
   - for inter-city, international buses
   -for city, inter-city, international taxi
   - for passenger cars
35 Cloakrooms
36 Toilets
37 Carriers
38 Services of psychics
39 Car wash
40 Storehouses (hangars)
41 Air tickets sale offices
42 Peddlers

A pilot statistical product
"Dordoy Market Survey"

Specify needs	Design	Build	Collect – exhaustive survey	Collect – sample survey	Process	Analyse	Disseminate	Evaluate
1.1 Identify needs	2.1 Design outputs	3.1 Build collection instrument	4.1 Create frame & select sample	4.1 Create frame & select sample	5.3 Review and validate	6.2 Validate outputs	7.2 Produce dissemination products	8.1 Gather evaluation inputs
1.2 Consult and confirm needs	2.2 Design variable descriptions	3.2 Build or enhance process components	4.2 Se4t up collection	4.2 Se4t up collection	5.4 Edit and impute	6.3 Interpret and explain outputs	7.3 Manage release of dissemination products	8.2 Conduct evaluation
1.3 Establish output objectives	2.3 Design collection	3.3 Build or enhance dissemination components	4.3 Run collection	4.3 Run collection	5.7 Calculate aggregates			8.3 Agree an action plan
1.4 Identify concepts	2.4 Design frame and sample	3.4 Configure workflow	4.4 Finalize collection	4.4 Finalize collection	5.8 Finalize data files			
1.5 Check data availability	2.5 Design processing and analyses							
1.6 Prepare business cases	2.6 Design production system and workflow							

Of 44 sub-processes completed - 35 sub-processes are for one-time survey

Need and advantages of using GSBPM

Description of pilot statistical product "Dordoy" has led to the following conclusions:

- **Standardization of processes;**

- **Avoiding duplication;**

- **Facilitation of staff rotation;**

- **Documentation of processes from A to Z;**

- **Audit of work quality (both internal and external);**

- **Identification of bottlenecks and gaps;**

- **Links with the common database to post all documents/instructions on INTRANET.**

1. The Balanced financial results (Finance statistics)
2. Migration statistics (Demography statistics)
3. Volume of industrial output (Industry statistics)
4. Contract works in construction (Construction statistics)
5. Retail and wholesale trade turnover (Trade statistics)
6. Tourism statistics (Service statistics)
7. CPI: expansion of geographical coverage (Price statistics)

Национальный статистический комитет
Кыргызской Республики

МЕТОДОЛОГИЧЕСКИЕ ПОЛОЖЕНИЯ ПО СТАТИСТИКЕ

Выпуск второй

Бишкек 2012

Second edition: includes 73 methodological guidance

Requirements to the preparation of methodological guidelines in statistics

1. **Subject of statistics:** social and economic processes and events under study in terms of quality and quantity.

2. **Objectives and tasks:** main directions for a complete and comprehensive picture of the status and development of an event as a whole in a certain links and relationship of its different aspects, studying the relationship of attributes, development of an event.

3. **Classification categories:** national and international classifications and codes for technical, economic and social information, attributes used for classification of statistical units.

4. **Normative and legal structure:** the list of normative, legal and methodological bases in a given field of statistics, references to corresponding sections and certain paragraphs in the law, international methodological guidelines, provisions, recommendations and concepts.

5. **General principles for compilation of statistical indicators:** metadata that describe subject matter indicators for understanding relationship between different national surveys and relationship with international guiding principles.

6. **Data coverage, statistical units:** geographical coverage, type of statistical observation and its specifics, set of events and units on which data shall be collected, possible exceptions in the population, classification attributes that characterize the object and observation unit.

7. ***Data collection:*** basic period, data sources, identification of weighted average and aggregate data.

8. ***Data imputation techniques:*** formulas and examples for imputation, including description of procedures for imputation of missing values (expert estimates and imputations); specifics of valuation (current, comparative, basic, market, FoB and other prices); application and use of imputed data; control of objectivity of imputed data

9. ***Statistical (reporting) units:*** description survey statistical units (enterprise, group of enterprises, part of an enterprise, local units, individual etc.

10. ***Types of statistical observations and their specifics:*** exhaustive survey, sample survey, census etc.

11. ***Sampling stratification and distribution***

12. ***Sampling procedure***

13. ***Data editing and control***

14. ***Data collection:*** data collection mode (post, electronic, telephone, via interviewers); tools; arithmetical and logical control of input and aggregate statistical data.

15. ***Compilation breakdowns:*** regional breakdowns, types of output tables etc.

16. ***Data dissemination:*** **timeliness, accessibility**

The structure of the systems of statistical indicators
(approved in 1998, maintained since 1990 in Excel format)

(265 tables)	Sector	Group	Sub-group	Matrix
The Real Sector	1			
National accounts		101		
			00	
National accounts in current prices				1010001
The General Government Sector	2			
Revenues of the public sector		201		
			00	2010001
Financial sector	3			
Analytical accounts of the banking sector		301	00	
				3010001
External sector	4			
Balance of payment		401		
			00	4010001
Social sector	5			
Population		501		
Number of resident population by sex and age group			00	5010001

5.01.00.02 Жынысы, негизги курактык топтору боюнча шаар жана айыл жерлериндеги туруктуу калктын саны

Resident population by sex, basic age group, urban and rural area

Resident population by sex, main age groups, urban and rural areas

Кјрсјткічтін атальшы	Наименование показателей	Кјрсјткічтін коду Код показателя Code of item	Мезгилділік Периодичность Periodicity			Јз убагында берій Своевре-менность Timeliness	Items
			ай (А) мес. (М) Month	кварт. (КВ) Quarter	жыл (Ж) год (Г) Year		
Бардьк калк	Все население	100000			Г	3М	Total population at the age
анын ичинде курагы, жашы:	в том числе в возрасте, лет:						of which:
эмгекке жарамдуу жашка чейинкилер	моложе трудоспособного возраста	100001			Г	3М	under working
эмгекке жарамдуу жаштагылар	в трудоспособном возрасте	100002			Г	3М	of working
эмгекке жарамдуу жаштан улуулар	старше трудоспособного возраста	100003			Г	3М	over working

Natstacom produces
(annually)

- Data collection via **276** state statistical forms (nearly **500.000** indicators)

- **2 mln.** statistical forms entered into databases

- **3,7 bln.** input statistical indicators processed

Statistics Norway: Assessment of NSC's metadata

- metadata are generally not structured in a methodological way: within subject matter units there is no logical division by different metadata concepts and coordination of metadata among subject matter units

- methodological guidelines in general cover output indicators (variables) and do not contain input variables

Recommendations of experts from Statistics Norway

- define a "statistical unit" in line with Eurostat's definition

- describe and collect input variables and statistical units by subject matter areas

- collect and describe classifications

- collect and describe codes of variables in databases.

Metadata system comprising of 4 parts :

- metadata for respondents

- metadata for users

- metadata for statisticians

- metadata for IT.

CLASSIFICATION OF STATISTICAL ACTIVITIES

Domain 1: Demographic and social statistics

- 1.1 Population and migration
- 1.2 Labour
- 1.3 Education
- 1.4 Health
- 1.5 Income and consumption
- 1.6 Social protection
- 1.7 Human settlements and housing
- 1.8 Justice and crime
- 1.9 Culture
- 1.10 Political and other community activities
- 1.11 Time use

Domain 2: Economic statistics

- 2.1 Macroeconomic statistics
- 2.2 Economic accounts
- 2.3 Business statistics
- 2.4 Sectoral statistics
- 2.4.1 Agriculture, forestry, fisheries
- 2.4.2 Energy
- 2.4.3 Mining, manufacturing, construction
- 2.4.4 Transport
- 2.4.5 Tourism
- 2.4.6 Banking, insurance, financial statistics
- 2.5 Government finance, fiscal and public sector statistics

- 2.6 International trade and balance of payments
- 2.7 Prices
- 2.8 Labour cost
- 2.9 Science, technology and innovation

Domain 3: Environment and multi-domain statistics

- 3.1 Environment
- 3.2 Regional and small area statistics
- 3.3 Multi-domain statistics and indicators
- 3.3.1 Living conditions, poverty and cross-cutting social issues
- 3.3.2 Gender and special population groups
- 3.3.3 Information society
- 3.3.4 Globalisation
- 3.3.5 Indicators related to the Millennium Development Goals
- 3.3.6 Sustainable development
- 3.3.7 Entrepreneurship
- 3.4 Yearbooks and similar compendia

Domain 4: Methodology of data collection, processing, dissemination and analysis

- 4.1 Metadata
- 4.2 Classifications
- 4.3 Data sources
- 4.3.1 Population and housing censuses; registers of population, dwellings and buildings
- 4.3.2 Business and agricultural censuses and registers

- 4.3.3 Household surveys
- 4.3.4 Business and agricultural surveys
- 4.3.5 Other administrative sources
- 4.4 Data editing and data linkage
- 4.5 Dissemination, data warehousing
- 4.6 Statistical confidentiality and disclosure protection
- 4.7 Data analysis

Domain 5: Strategic and managerial issues of official statistics

- 5.1 Institutional frameworks and principles; role and organization of official statistics
- 5.2 Statistical programmes; coordination within statistical systems
- 5.3 Quality frameworks and measurement of performance of statistical systems and
- offices
- 5.4 Management and development of human resources
- 5.5 Management and development of technological resources (including standards for
- electronic data exchange and data sharing)
- 5.6 Coordination of international statistical work
- 5.7 Technical cooperation and capacity building

Thanks for attention!