

Quality in the gathering of online data: Standardising online questionnaires, integration with administrative data sources and development of bias control mechanisms

Session number: 26

June 3, 2016

Cristina Prado Valle – <u>cristina prado@eustat.eus</u>

Carmen Guinea Lete - <u>mcarmen guinea@eustat.eus</u>





Quality in the gathering of online data:



- Background overview
- Standardising online questionnaire
- Integration with administrative sources
- Development of bias control mechanisms
- Conclusions / New challenges



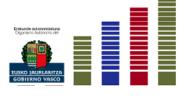




2016 What is EUSTAT?

- An autonomous agency established by the Basque Statistical Law of 1986.
- Population: 2.173.210
- Headquarters are located in Vitoria. Provincial offices are in Bilbao, San Sebastian and Vitoria.
- Some facts:
 - Staff: 154
 - Statistical plans completed: 7
 - Annual dissemination:
 - 547.724 visitors to web site and 2.597.824 pages view
 - Answers almost 300 queries and 900 telephone requests
 - Distribution of more than 160 press releases per year.
 - Operations done by EUSTAT in 2015: 105 + 99 as participant
 - Budget 2016: 12.501.000







Project Planning

STAGE 1

STAGE 2

STAGE 3

June 2009 - July 2012

September 2012 – December 2013

January 2014 - December 2015

Define all characteristics of the future software platform and build the basic framework version

Goals:

- > Define a single design to be applied to all questionnaires, the general graph control procedures, the different validation types and a single management and the error control framework to be used in all web applications
- ➤ Create a unique web survey homepage with various levels of user profile
- ➤ Build the basic framework to develop all pages of the web surveys: <u>organisation</u> and hierarchy, common style sheet, basic browsing map and menus

➤Develop the first complete web questionnaire

Implement the project in the Economics area

Goals:

- > Migrate all the web questionnaires and develop new web questionnaires directly in the new platform
- > Increase the framework with new functionalities and components
- > Develop best practices and user's manuals

Implement the project in the Demographic and Social area

Goals:

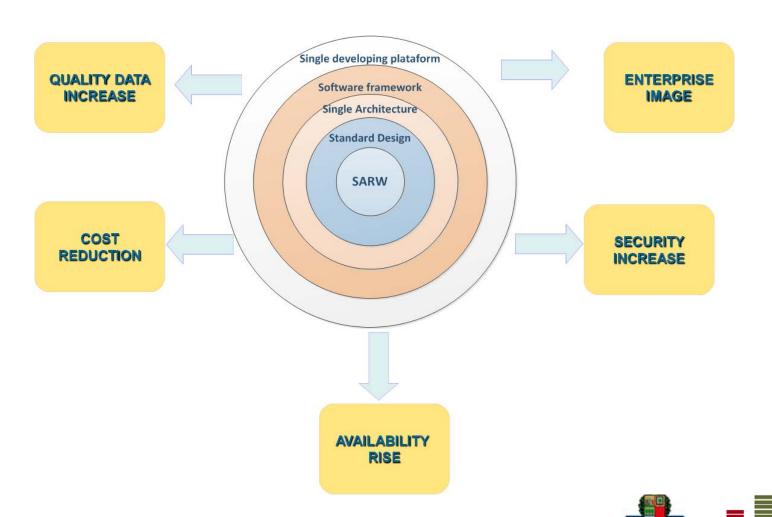
- > Migrate all the web questionnaires and develop new web questionnaires directly in the new platform
- ➤ Increase the framework with new functionalities and components
- ➤To build a control and monitoring computer application for demographic surveys
- >To build the first version of the respondents website







Goals to achieve





Reduction of costs





News surveys



Maintenence of surveys





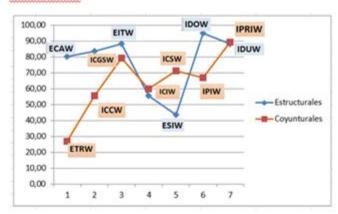




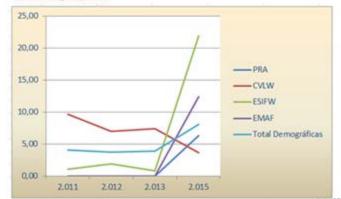
Volume of data gathered via Web -2015

		2013			2014			2015	
	Total	Web	%Web	Total	Web	%Web	Total	Web	%Web
Demográficas - Estructurales	5.293	279	5,27	5.512	667	12,10	5.209	645	12,38
EPTW - Presupuestos de Tiempo	5.293	279	5.27						
ECVW - Encuesta de Condiciones de Vida				5.512	667	12,10			
ENAF - Encuesta de Medio Antilente							5.209	045	12,38
Demográficas - Coyunturales	10.783	344	3,19	7.142	74	1,04	47.236	3.606	7,63
CVLW - Conciliación de Vida Laboral	3.925	290	7,39				4.262	150	3,64
ESIFW - Sociedad de Información - Familias	0.858	54	0,79	7.142	74	1,04	4.000	1.024	21,95
PRAW - Pobelbión respecto a la Actividad							38.288	2.405	6,34
Total Demográficas	16.076	623	3,88	12.654	741	5,86	52.445	4.251	8,11
Económicas - Estructurales	19.415	11.252	57,96	18.495	11.885	64,26	19.270	12.646	65,63
DAPW - Directorio de Administraciones Públicas	766	766	100,00	761	761	100,00	665	665	100,00
ECAW - Construcción	726	452	62,26	709	455	64,17	776	624	80,41
EVAW - Industrial	2.499	1.520	60.82	2.438	1.575	64,60	2.543	2 126	83,60
EITW - Innovación Tecnológica	3.413	2.934	85,97	3.082	2.700	87,61	3.241	2.867	88,46
ESerW - Servicios	2.311	1.400	63.44	2.302	1.616	70.20	3.236	1.802	55,69
ESIN - Sociedad de Información - Empresas	7.767	2.473	31,88	7.758	3.481	44,87	7.249	3.170	43,73
IDOW - Actividades I+D Organismos	43	40	93,02	43	42	97,67	41	29	95,12
IDUW - Actividades I+D Universidades	22	21	95,45	19	17	89,47	17	15	88,24
IDW - Actividades I+D	1.418	1,247	87,94	1.383	1.238	89,52	1.482	1,318	88,93
OPRW - Gasto y Financiación Privada	400	333	72,39						
Económicas -Coyunturales	4.751	2.614	55,02	4,546	2.541	55,90	4.333	2.582	59,59
ETRW - Establecimientos Turísticos Receptores (Media mensual)	927	132	14,24	924	196	21,21	900	290	26,92
ICCW - Índice Coyuntural Construcción (Media Trimestra)	500	360	58,43	536	314	58,58	535	297	55,51
ICOSW - Índice Comercio Grandes Superficies (Media mensual)	31	24	77.42	31	23	74,19	29	23	79.31
(CIW - Îndios Comercio Minorista (Nedia Trimestra)	341	159	40,63	297	155	52,19	290	174	60,00
ICSW - Îndice Coyuntural Servicios (Media Trimestra)	1.519	1.048	68,99	1.430	1.010	70,19	1.406	1.002	71,27
IPM - Índice Producción Industrial (Media mensual)	756	522	en.05	748	486	64,97	727	467	00.99
IPRIW - Îndice de Precios Industriales (Media mensual)	578	379	66,57	571	367	62,62	380	339	89,21
Total Económicas	24.166	13.866	57,38	23.041	14.426	62.61	23.603	15.228	64.52

Economic



Demographic











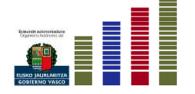
Standardising web questionnaires

Challenges



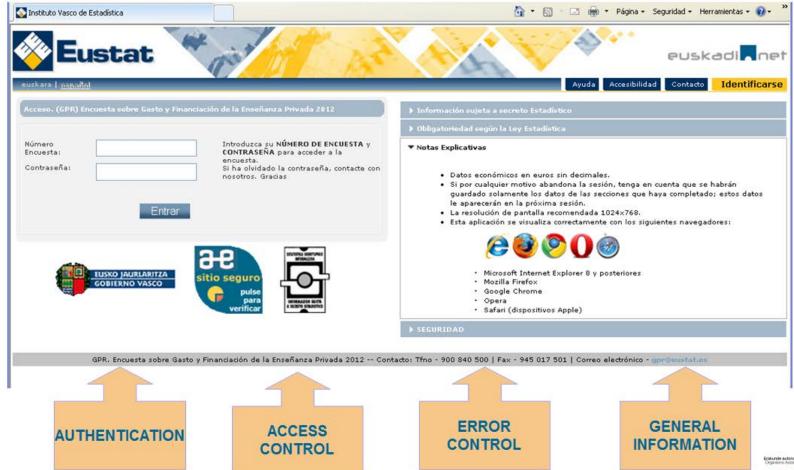
- Self-management
- Usability
- No response
- Security







Entry Portal











Informative Page



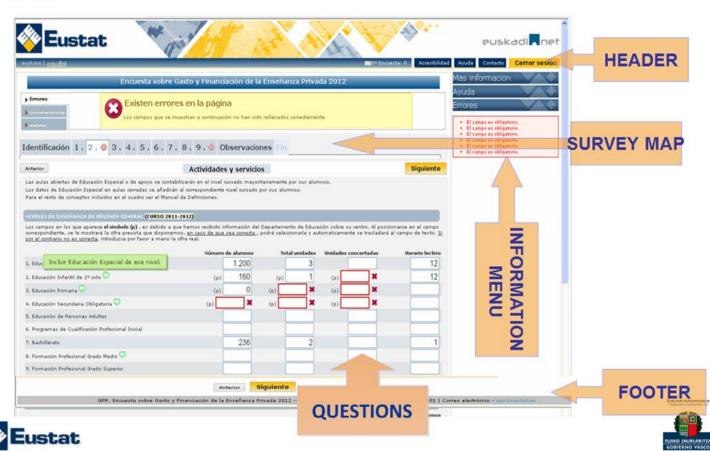






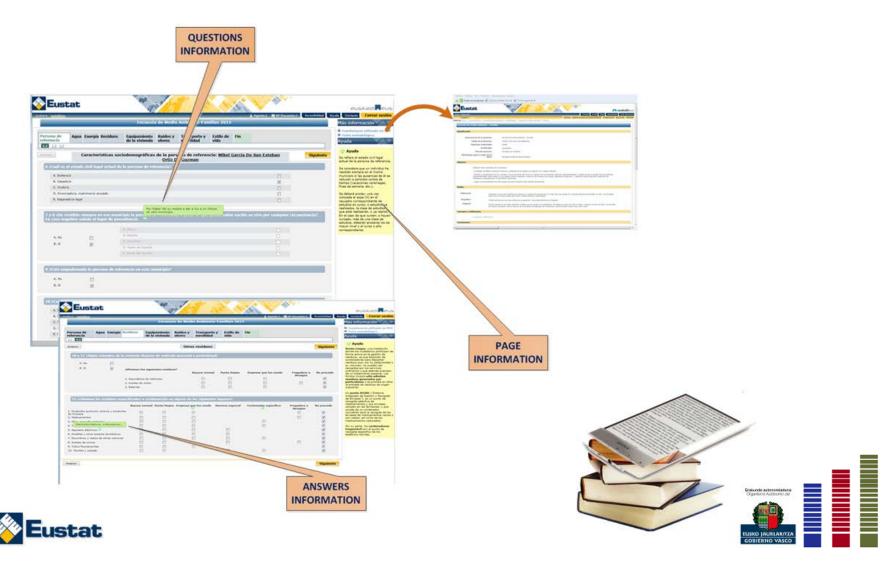
Standard design

Internet Explorer 8 or later, Mozilla Firefox, Opera, Google Chrome, Safari





Information system



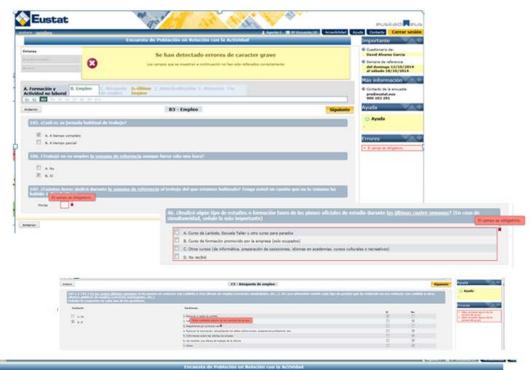


Management of error

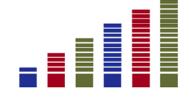




| S. Abbachin (per edet)
| C. Retrado a percolo prepar
| D. Retrado abrilhosementa por invalid
| D. Retrado berguariente por invalid
| D. Retrado berguariente por invalid
| D. Republisto a la separa de julifación
| D. Retrado por otras causas

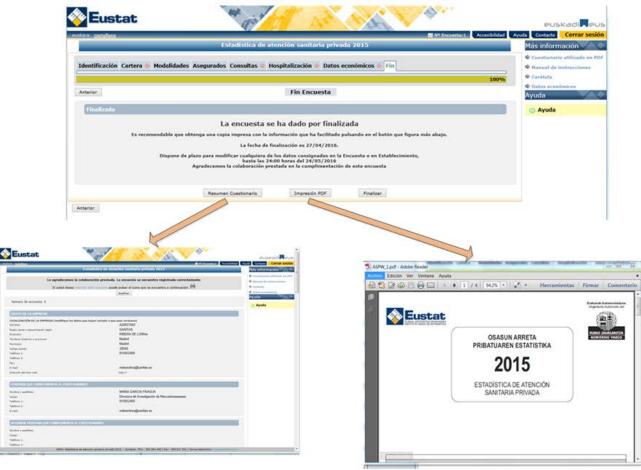








Data Security









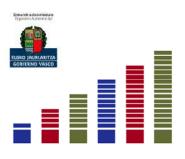


Integration with administrative data sources



- Producing statistics
- Shortening of surveys
- Suggested responses
- Validations of responses







Suggested responses







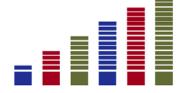


Validation of responses



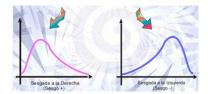
Eustat	Color Art Ave I	euskadi
ra petibo	1 Ap Encuesta de Población en Relación con la Actividad	enterii 🗈 Irii Erosesta 20 Accestolidad Ayuda Contacto Cerrar Ses
Formación y B. Em ctividad no laboral	npleo C. Büsqueda 0. Ülbirro E. Autoclasificación Fia de empleo Empleo	© Cuestionario dei Jose Oscar Covesillas Quint © Semana de referencia del dessingo 12/10/2014 al salvado 18/10/2014
nterior	C1 - Búsqueda de empleo	Siguiente Más información
140, ¿Está buszando em	pleo?	© Contacto de la enquesta predissustatueus 900 103 291
E s. si		Ayuda
terior		Ç Ayuda
	Are you looking for a job?	
Eustat	Are you looking for a job? Fincoesta de Población en Relación con la Actividad	
. Formación y B. Em	Encuesta de Públación en Relación con la Actividad	PUISKedil Province Puiskedil
. Formación y B. Em	Encoesta de Población en Relación con la Actividad	PUSKecil Perentia 20 Accessibilitati Apuda Contexto Cerrar ses [mportante © Contexto Perentia 20 Accessibilitati Apuda Contexto Cerrar ses [mportante © Contexto Perentia 20 Accessibilitati Apuda Contexto Cerrar ses
Formación y B. Em	Encuesta de Población en Relación con la Actividad C. Búnqueda (I. Utimo F. Antocimillos tim fin de empleo C.1 - Búsqueda de empleo	#USAccille
Formación y B. Em	Encuesta de Población en Relación con la Actividad C. Búnqueda (I. Utimo F. Antocimillos tim fin de empleo C.1 - Búsqueda de empleo	### Office and a second a seco

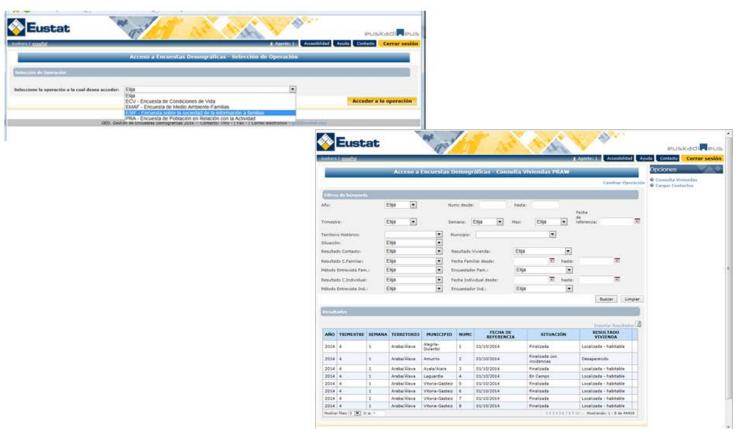






Other bias control mechanisms





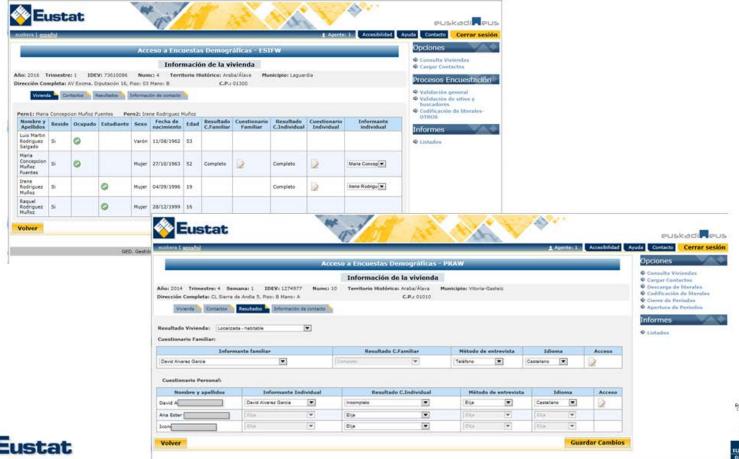






Control and monitoring application for demographics



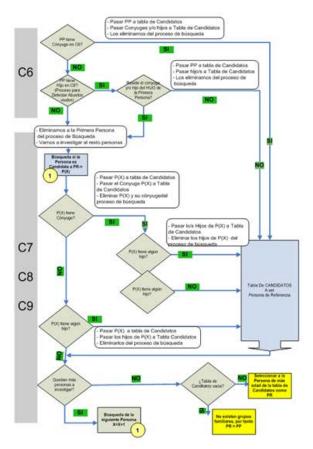






Algorithm to obtain the reference person













User satisfaction survey











Conclusions



- Greater number of web survey users
- Higher-quality answers
- Fewer blank or wrong answers
- Easier integration with other data







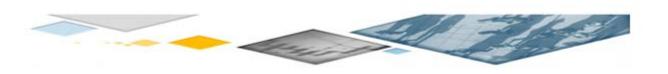
Challenges 2016-2017













Thank you for your attention



