5-B.2: CAWI System in NEC2018 (e-census or online census)

- Terminology :
  - CAWI: Computer Assisted Web Interviewing; or e-census ; or Online census
- Application of technological advancements in NEC2018
- **Self response system** : E-Census allows respondents to respond to the Census form through Internet.
- E-Census provides a safer way to respond to the Census form for respondents.
- In future, it will be the cost effective way of data compilation for censuses, surveys and business register system
- Need to promote e-census with the view of reducing workload of enumerators and cost of enumeration and data processing

5-B.2: CAWI System in NEC2018 (e-census or online census)

- **e-census software used:**
  - Front end: HTML 5
  - Back end : PHP 5, MySQL, jQuery
- **Data storage server system :**
- Main database:
  - MySQL db format
  - Main Location Centre at GIDC and
  - Backup System of db (redundant) at CBS.
  - Automatic Backup regularly + Manually at Hard-drive
- **Server Software:**
  - Windows Server,
  - Security SSL and
  - Server Antivirus (Managed by GIDC)

- **Major requirements** to operate this e-census form are as follow:
  - Internet access/ facility
  - Desktop computer or laptop or tablet or smart mobile phone
  - Web browser: Microsoft Edge, Chrome, Opera, Mozilla Firefox, Safari etc.

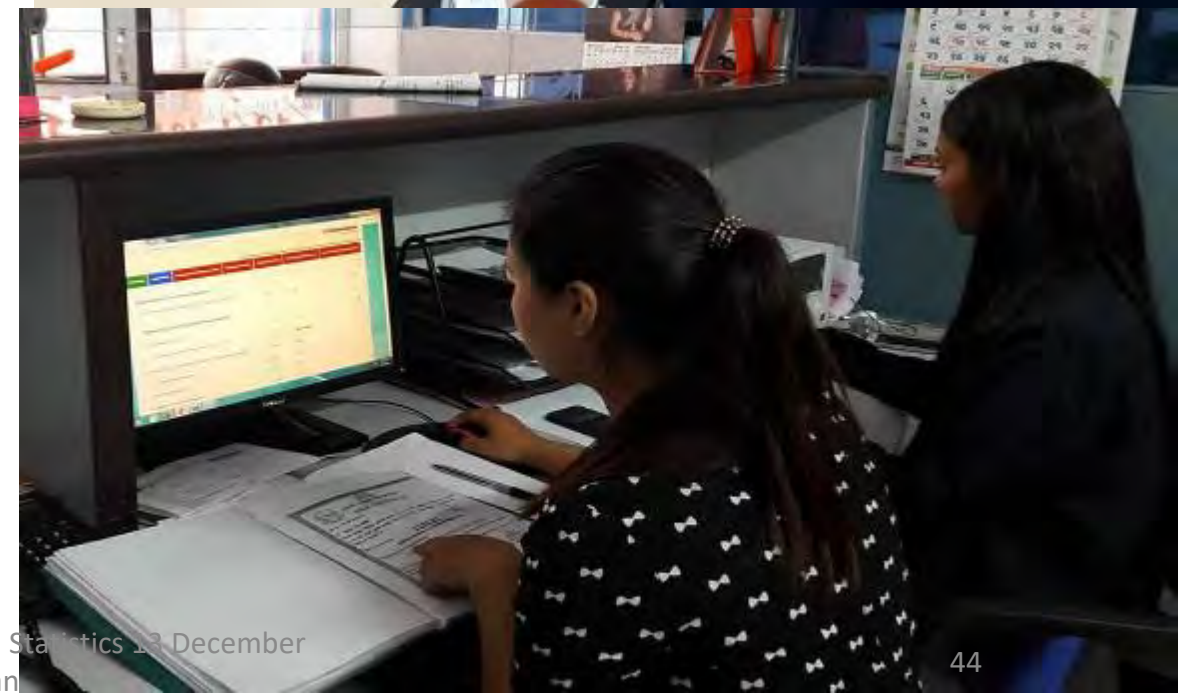
- The respondents of the establishments could fill or access to the e-census form from the valid census period, i.e. April 14 2018 to June 14 2018.

e-census in NEC2018

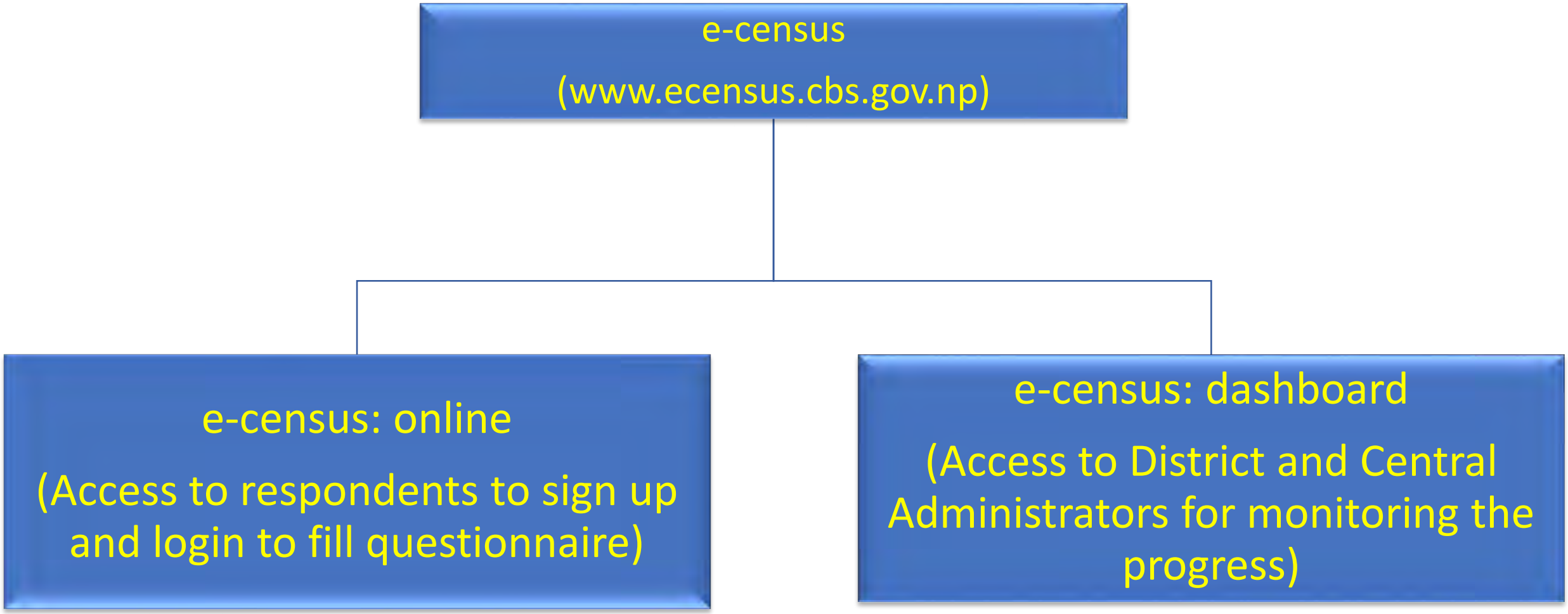
Distribution of e-census Token: Username and password

SN	Dist	Estb. Num	TokenID	TokenPass
1	407		DZVs1	E2H@h

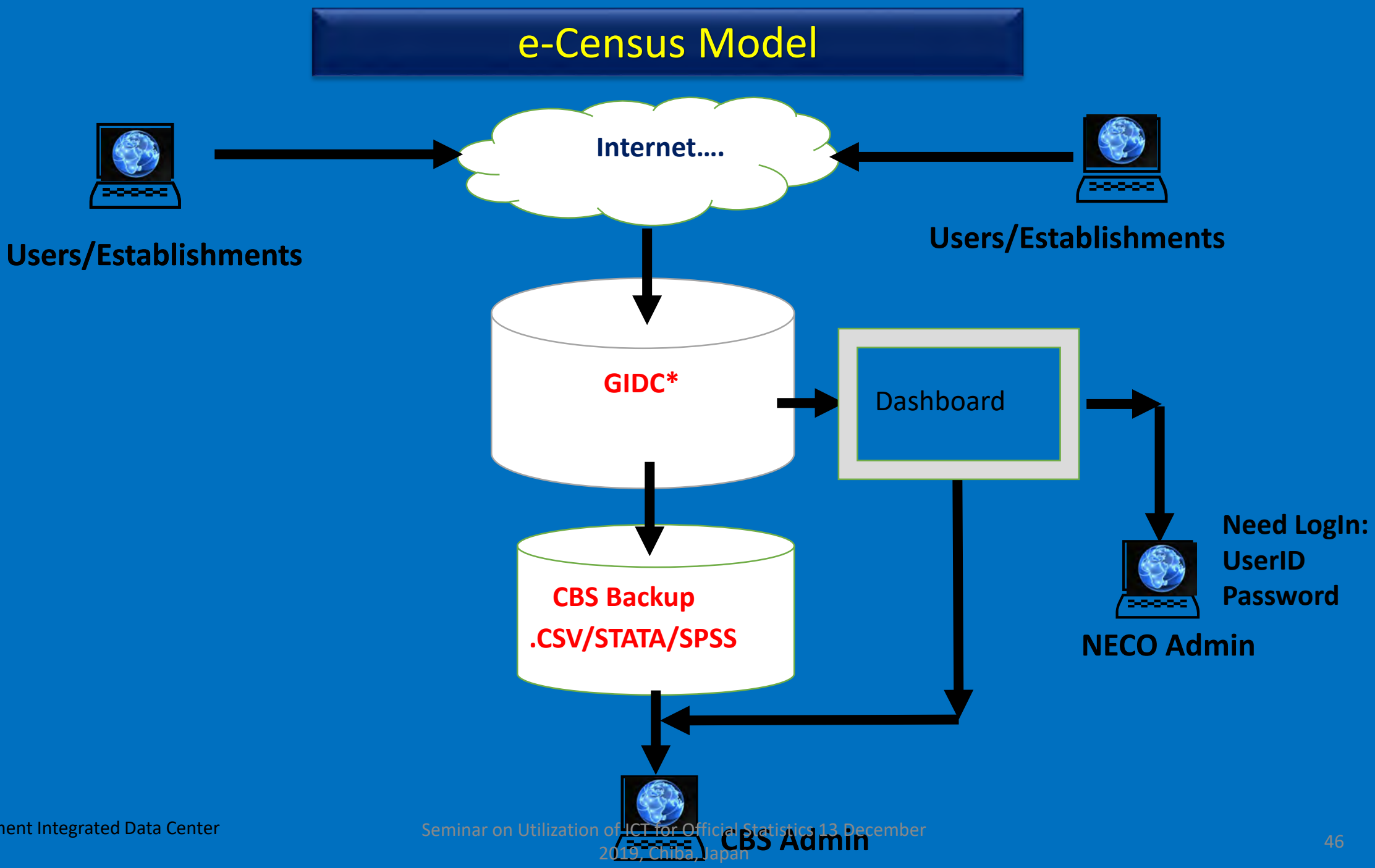
e-census enumeration



B.2: e-census system of NEC 2018

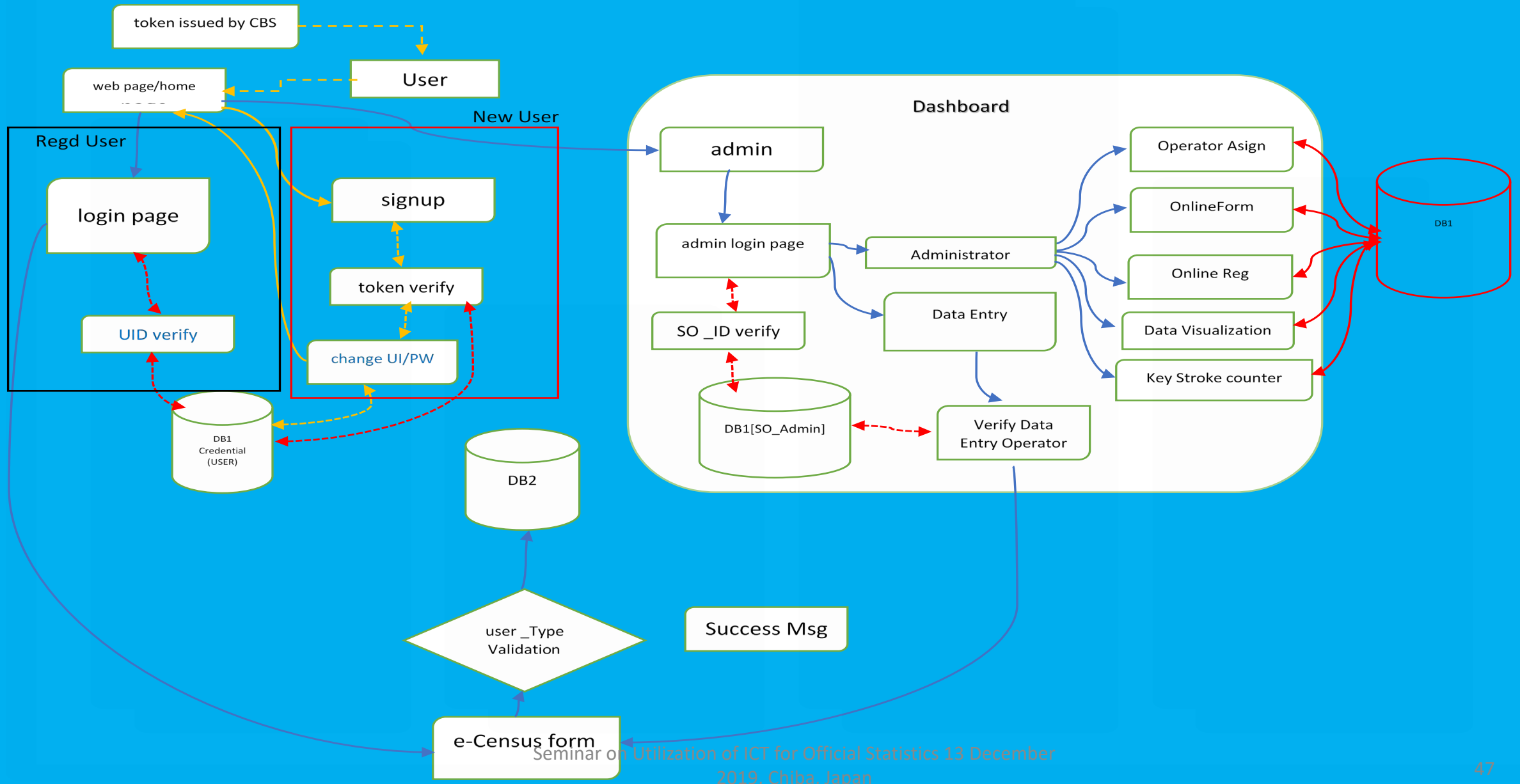


e-Census Model



* Government Integrated Data Center

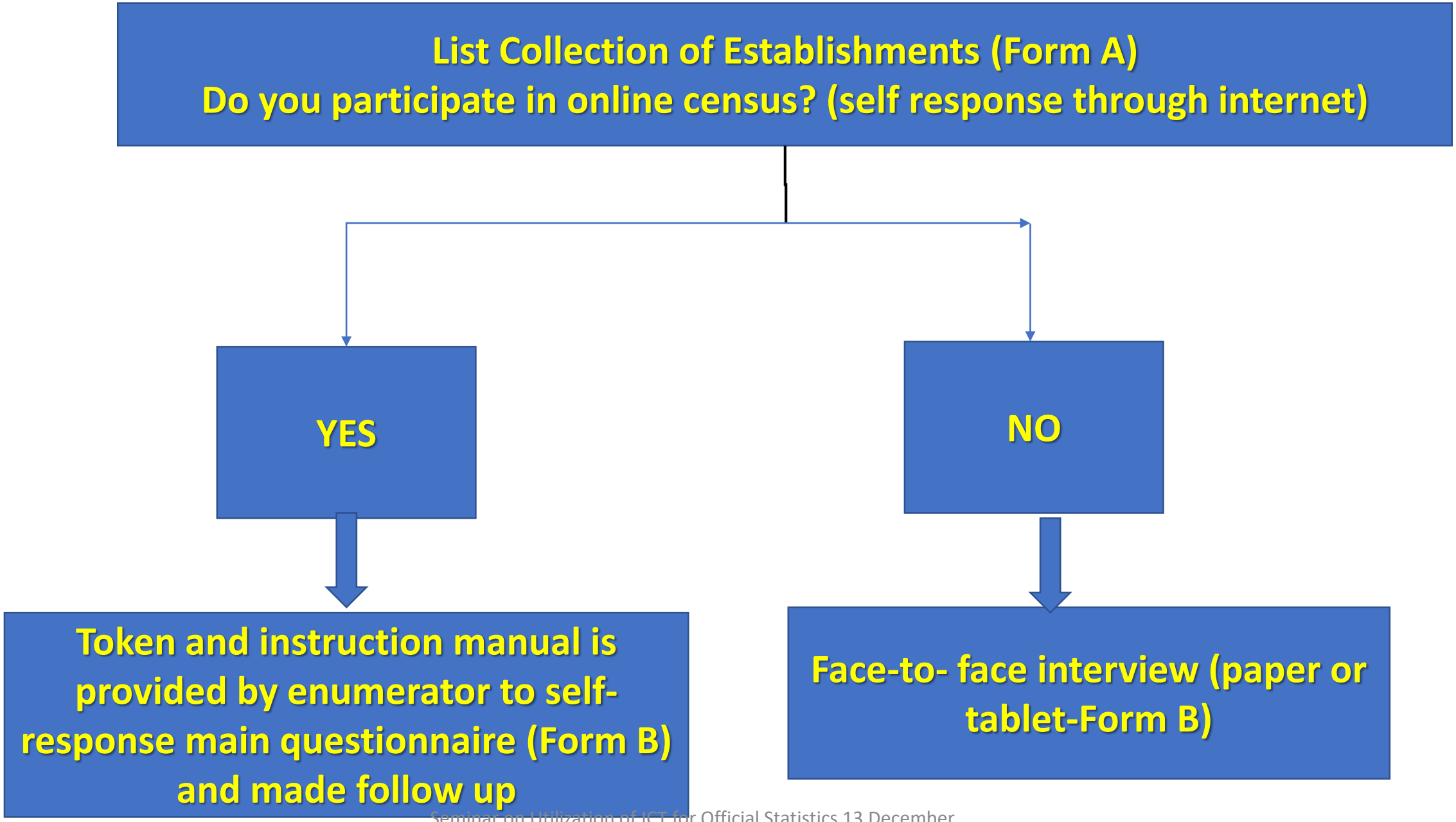
National Economic Census 2018



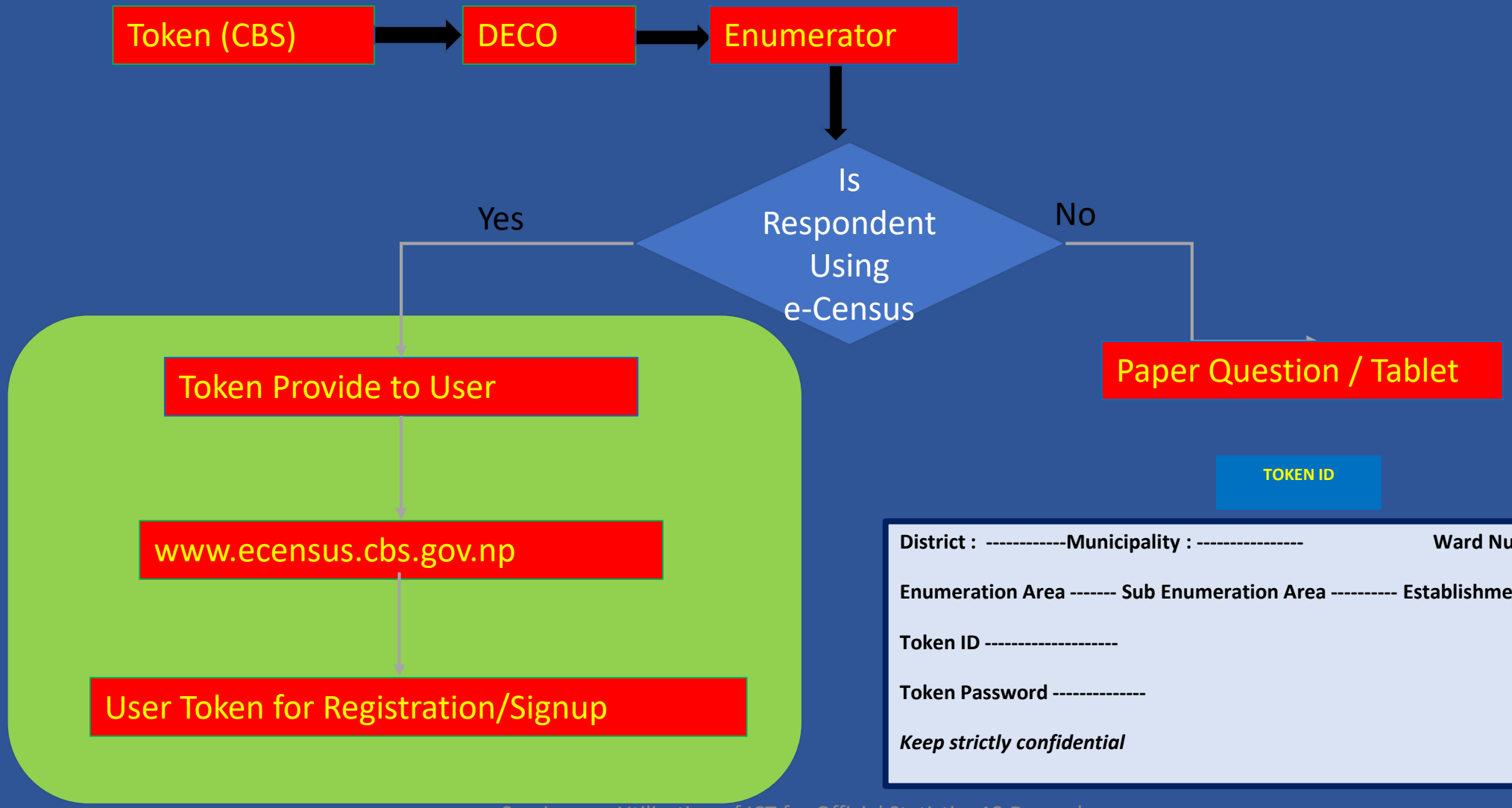
5-B.2: Token System in e-census

- Token : A word or a group of characters used to identify e-census user or respondent.
- Used for registration process only.
- Expire after successful registration of user.
- Can not be used more than one time.
- Unique for all with in a district or country.
- The tokens issued for one district can not be used for another district.

Name:				
SN	**Dist**	**Estb. Num**	**TokenID**	**TokenPass**
1	407		DZVH346	Q6g@Y
2	407		DZVc347	m@DJ3
3	407		DZVT348	b8ZF#
4	407		DZVT349	nNG#8
5	407		DZVR350	H$P6j


List Collection of Establishments (Form A)
Do you participate in online census? (self response through internet)
YES
NO
Token and instruction manual is provided by enumerator to self-response main questionnaire (Form B) and made follow up
Face-to- face interview (paper or tablet-Form B)

Token Distribution Mechanism



TOKEN ID

District : ----------Municipality : ---------- Ward Number: -----

Enumeration Area ------- Sub Enumeration Area ---------- Establishment No: ---------

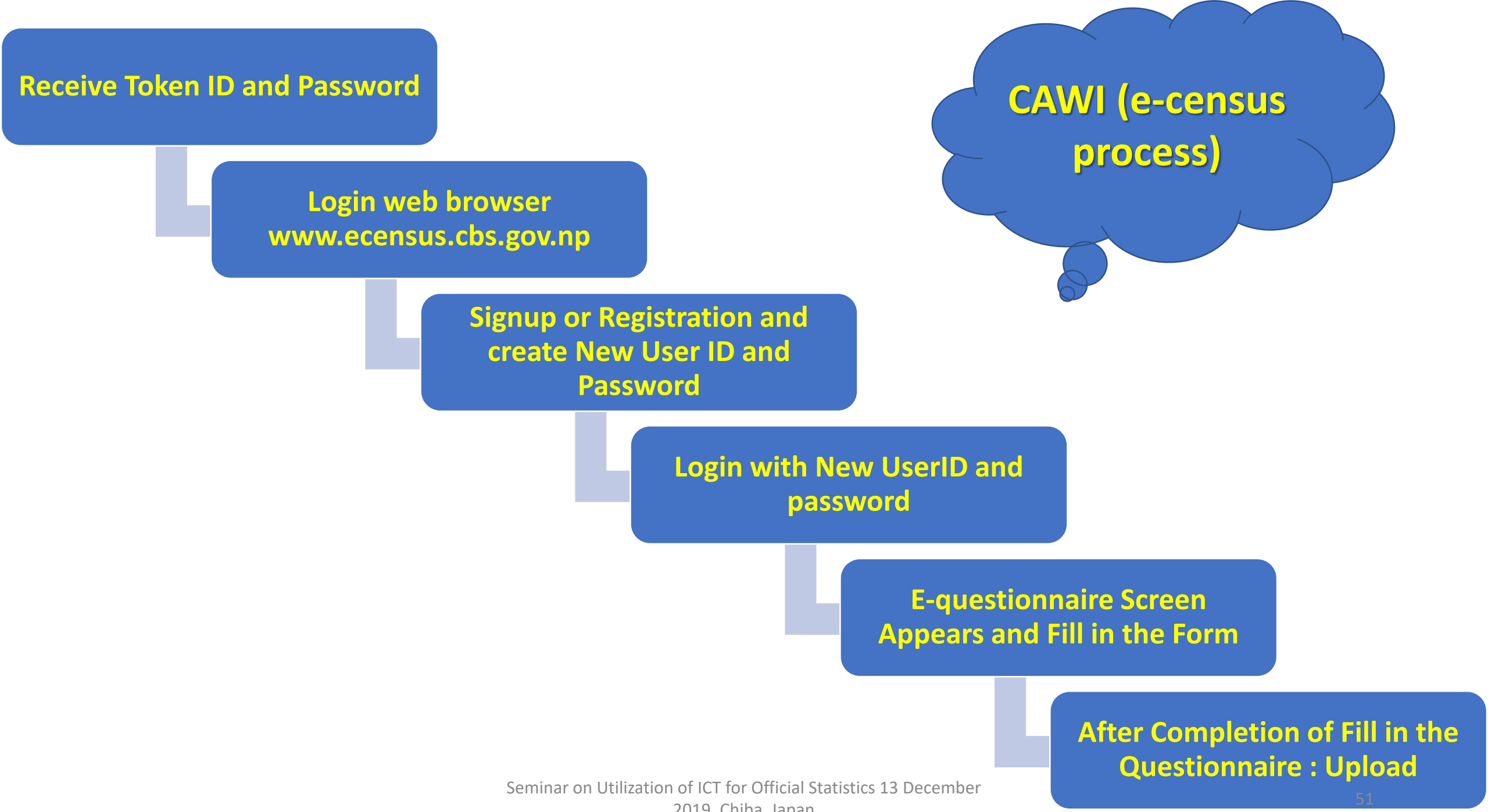
Token ID ----------

Token Password ----------

Keep strictly confidential

CAWI (e-census process)

- Receive Token ID and Password
- Login web browser www.ecensus.cbs.gov.np
- Signup or Registration and create New User ID and Password
- Login with New UserID and password
- E-questionnaire Screen Appears and Fill in the Form
- After Completion of Fill in the Questionnaire : Upload



e-Census Nepal

www.ecensus.cbs.gov.np

Dashboard | How to Register | Download Manual | Select Language : Nepali English

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नेपाल सरकार

केन्द्रीय तथ्यांक विभाग

राष्ट्रिय आर्थिक गणना २०७५

प्रश्नावली B

यस प्रश्नावलीमा सोधिएका विवरण तथ्यांक ऐन, २०१५ अनुसार गोप्य रहने छन् । कुनै पनि व्यावसायको विवरण व्यक्तिगत रूपमा प्रकाशनमा ल्याइने छैन । सामूहिक रूपमा तथ्यांकीय प्रयोजनको लागि मात्र प्रयोग गरिने छ ।

यस प्रश्नावलीका विवरण संकलन कार्य २०७५ साल वैशाख १ गतेबाट सुरु गर्नुपर्दछ ।

सबै अंकहरु अंग्रेजीमा मात्र लेख्नुपर्दछ ।

Login

Sign Up

नोट - यदि तपाई दर्ता हुनुभएको छैन भने पहिले दर्ता गरि प्रवेश गर्नुहोस् ।

प्रवेश गर्नुहोस्

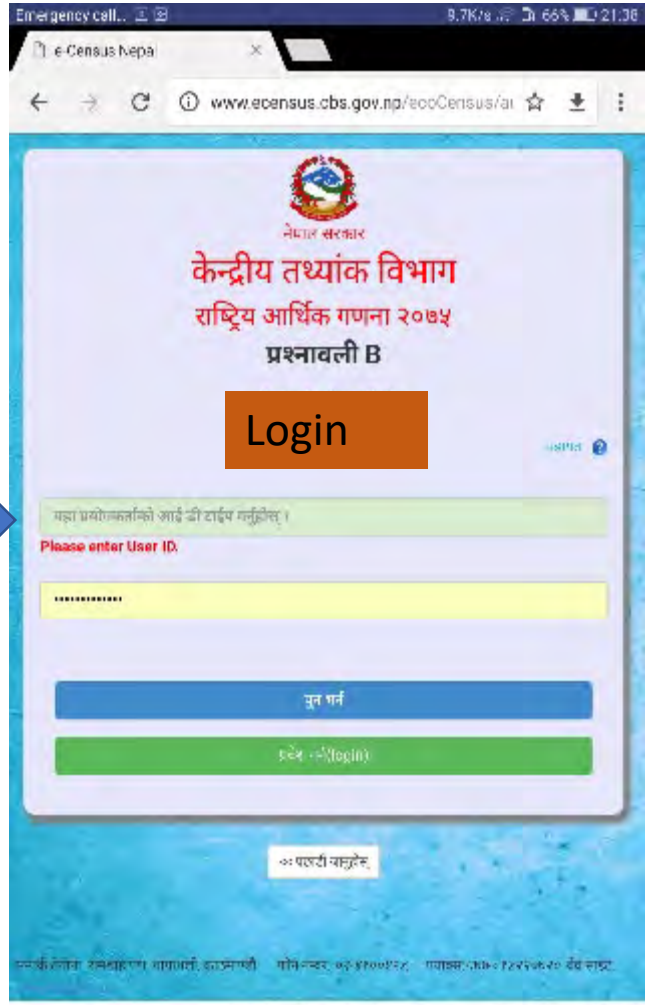
नया दर्ता गर्नुहोस्

सम्पर्क ठेगाना: रामशाह पथ, थापाथली, काठमाण्डौं फोन नम्बर: ०१-४१००४२४, फ्याक्स: ९७७-०१४२२७७२० वेव साइट: www.cbs.gov.np

Page visited: 5663 times.

ENG 2:37 PM 26-Feb-18

B.2: Process of e-census response



प्रयोगकर्ता: *Aayushma Book Store[UID:Amar123]*

Log Out !!

नेपाल सरकार

केन्द्रीय तथ्यांक विभाग

राष्ट्रिय आर्थिक गणना २०७५

Form B

नोट: * चिन्ह लगाएका फिल्ड अनिवार्य भर्नु पर्छ ।
यदि फिल्ड भर्न समस्या परेमा सहायता ? मा क्लिक गर्नुहोस् ।

Introduction | Legal Status | Business Operation | Tenure Status | Persons Engaged | Revenue/Sale, Expenses, Capital | Access to Credit and Respondents' Info.

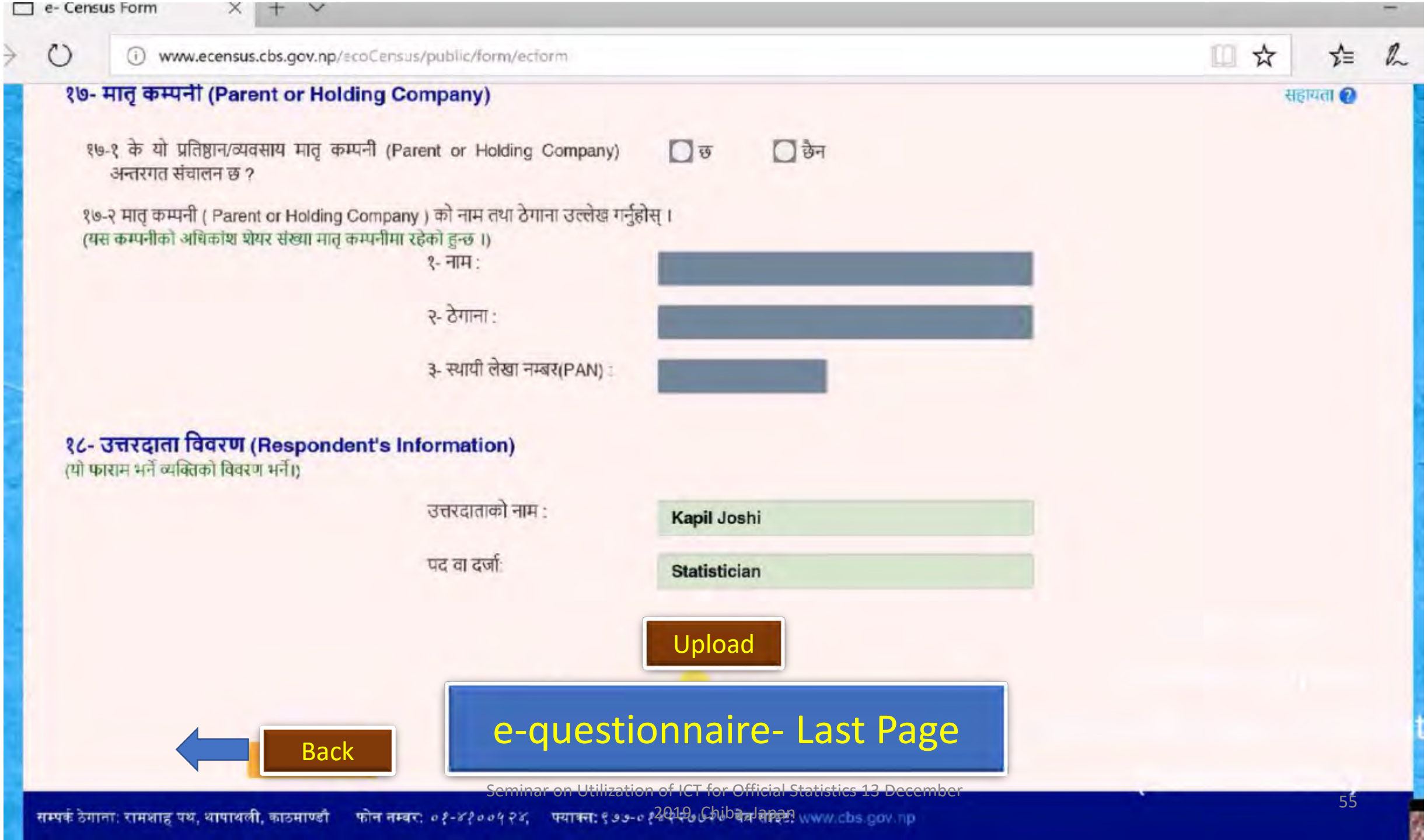
१- परिचयात्मक विवरण (Area Information):

सहायता ?

१-१ प्रदेश	१-२ जिल्ला	१-३ न.पा./गा.पा.	१-४ वार्ड नम्बर
प्रदेश-7	Kanchanpur	Bhimdatta Municipalit	09

e-questionnaire- First Page

१-६ गणना क्षेत्र(EA)	१-७ उप-गणना क्षेत्र(SEA)
001	001


e- Census Form
www.ecensus.cbs.gov.np/ecoCensus/public/form/ecform
१७- मातृ कम्पनी (Parent or Holding Company)
सहायता
१७-१ के यो प्रतिष्ठान/व्यवसाय मातृ कम्पनी (Parent or Holding Company) अन्तरगत संचालन छ ?
छ
छैन
१७-२ मातृ कम्पनी (Parent or Holding Company) को नाम तथा ठेगाना उल्लेख गर्नुहोस् ।
(यस कम्पनीको अधिकांश शेयर संख्या मातृ कम्पनीमा रहेको हुन्छ ।)
१- नाम :
२- ठेगाना :
३- स्थायी लेखा नम्बर(PAN) :
१८- उत्तरदाता विवरण (Respondent's Information)
(यो फाराम भर्ने व्यक्तिको विवरण भर्ने।)
उत्तरदाताको नाम :
Kapil Joshi
पद वा दर्जा:
Statistician
Upload
Back
e-questionnaire- Last Page
सम्पर्क ठेगाना: रामशाह पथ, थापाथली, काठमाण्डौ
फोन नम्बर: ०१-४१००५२४,
www.cbs.gov.np

धन्यवाद !!!

डाटा अपलोड सफल भयो ।

(Thank You !!!. Data is successfully uploaded.)

तपाईले केन्द्रीय तथ्यांक विभागवाट संचालित राष्ट्रिय आर्थिक गणना २०७५ मा सहभागी भई आफ्नो प्रतिष्ठान वा व्यवसायको तथ्याङ्क अनलाईन मार्फत उपलब्ध गराउनु भएकोमा धन्यवाद ।।

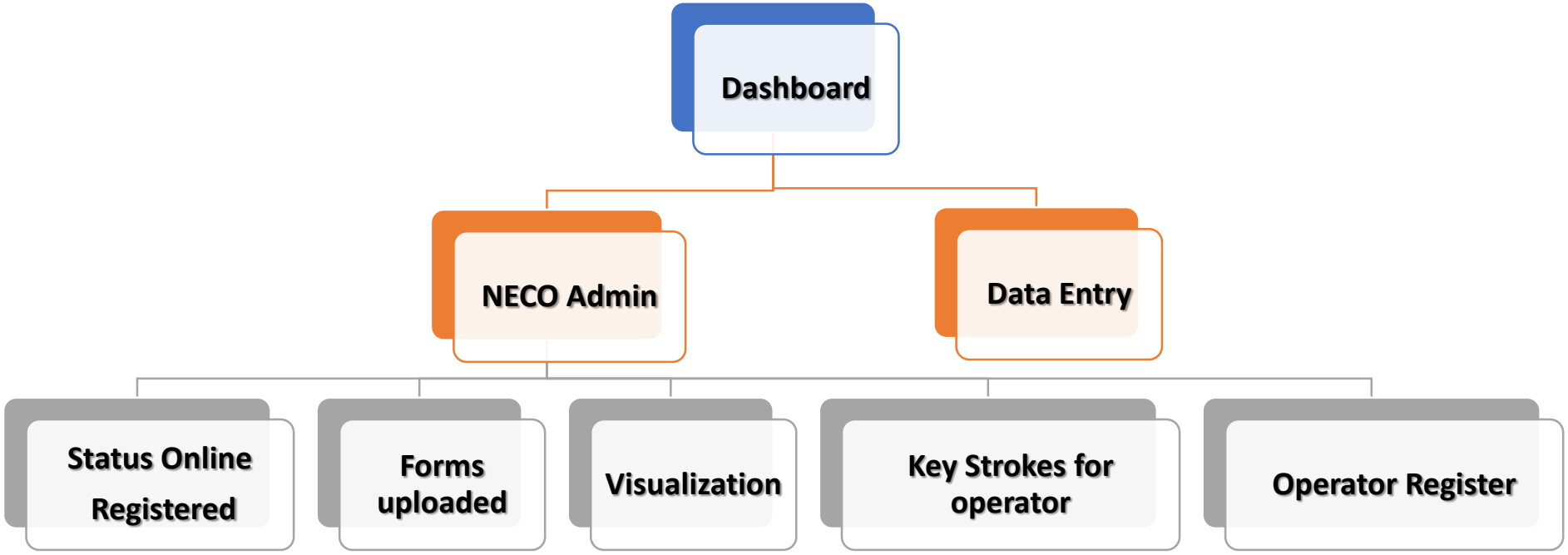
Close

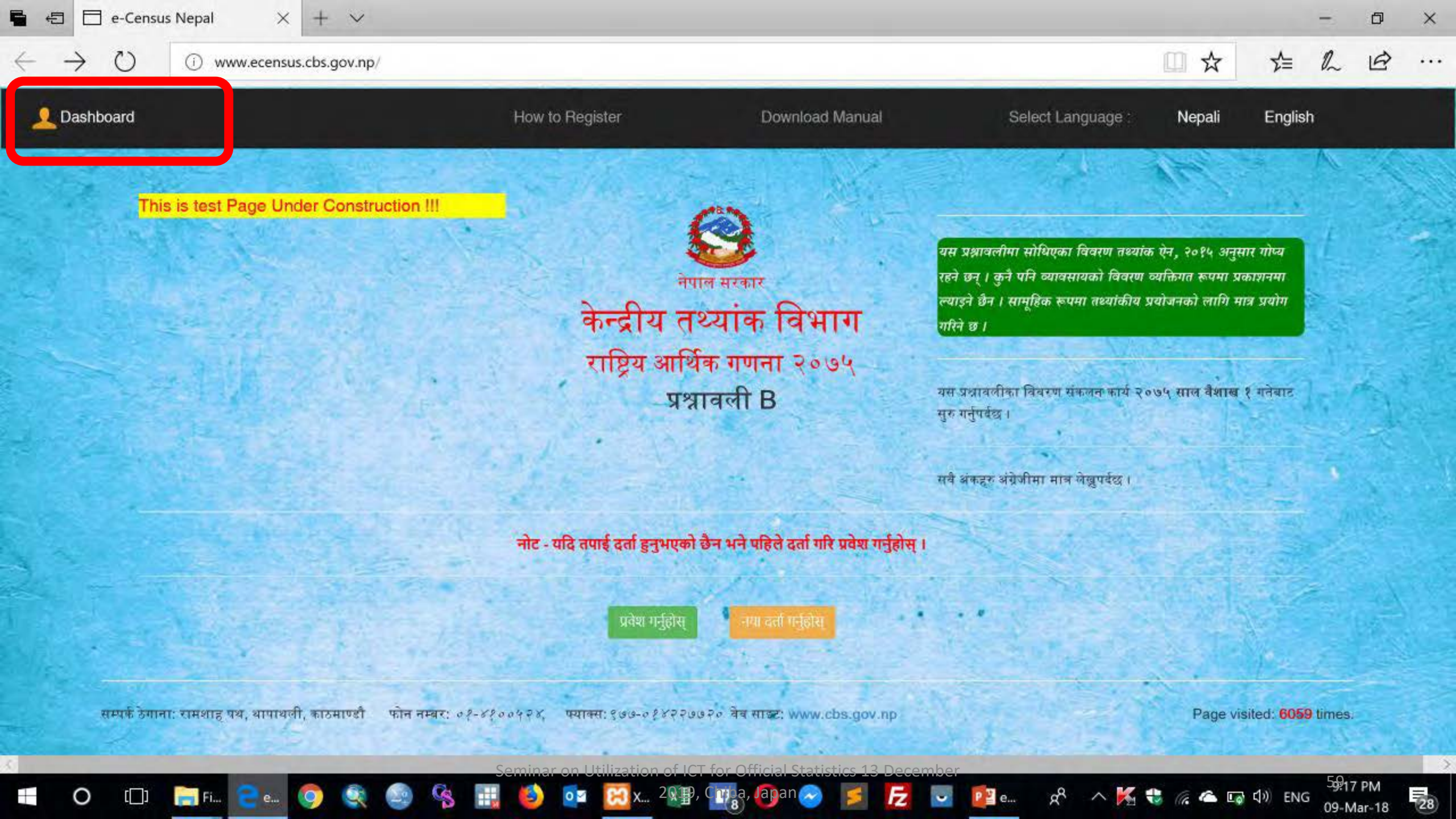
5-B.3: Utilization of ICT for Monitoring and Supervision

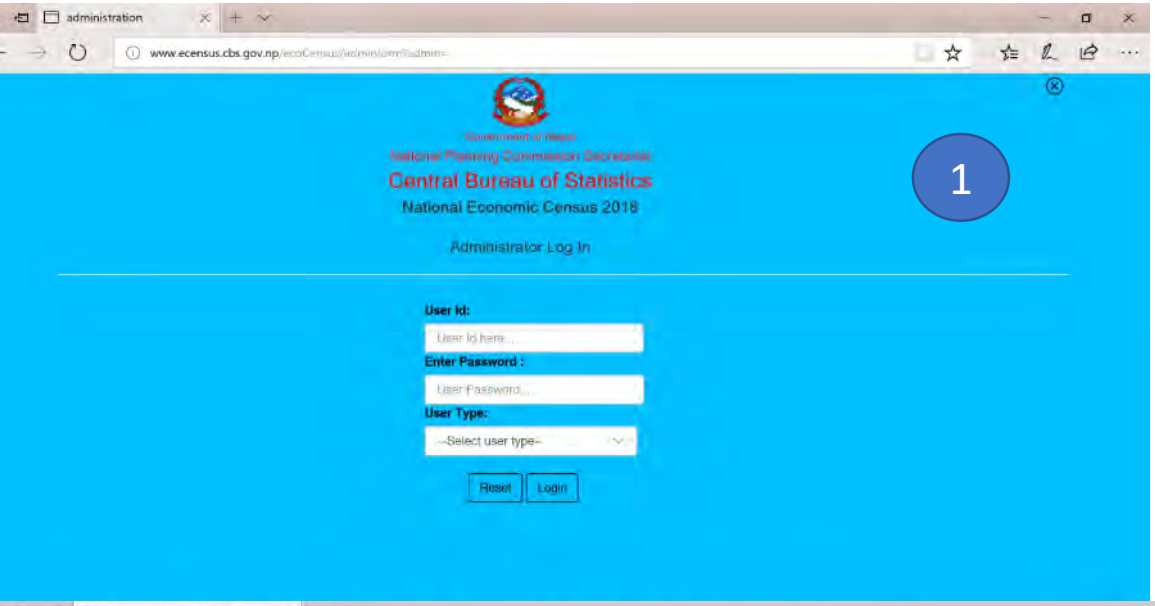
- **Provision of Recharge payment** of mobile to have communication with supervisor or District Economic Census Office or Central Office in two way communication
- **Provision of e-census and tablet base dashboard** system
  - Easy to monitor the work progress daily and accordingly supervise or give feedback to concerning field officials

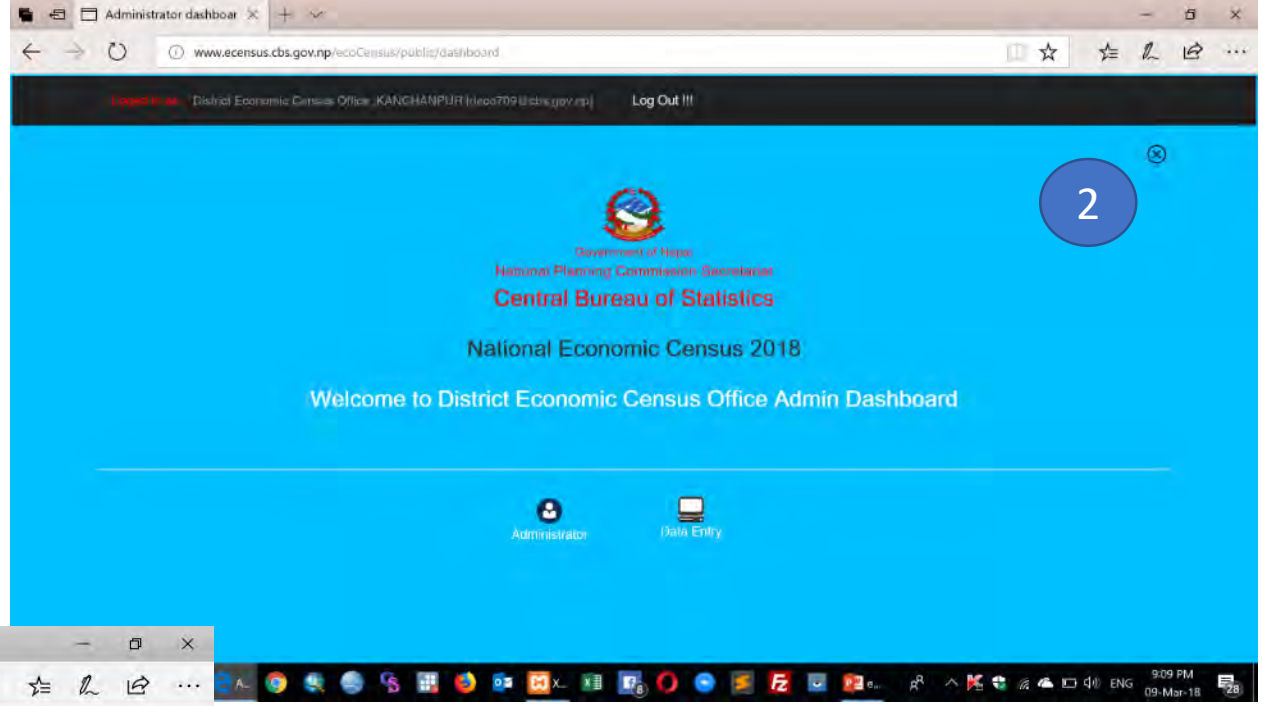
B.3: ICT as a Means of Progress Monitoring and Supervision of Data Collection

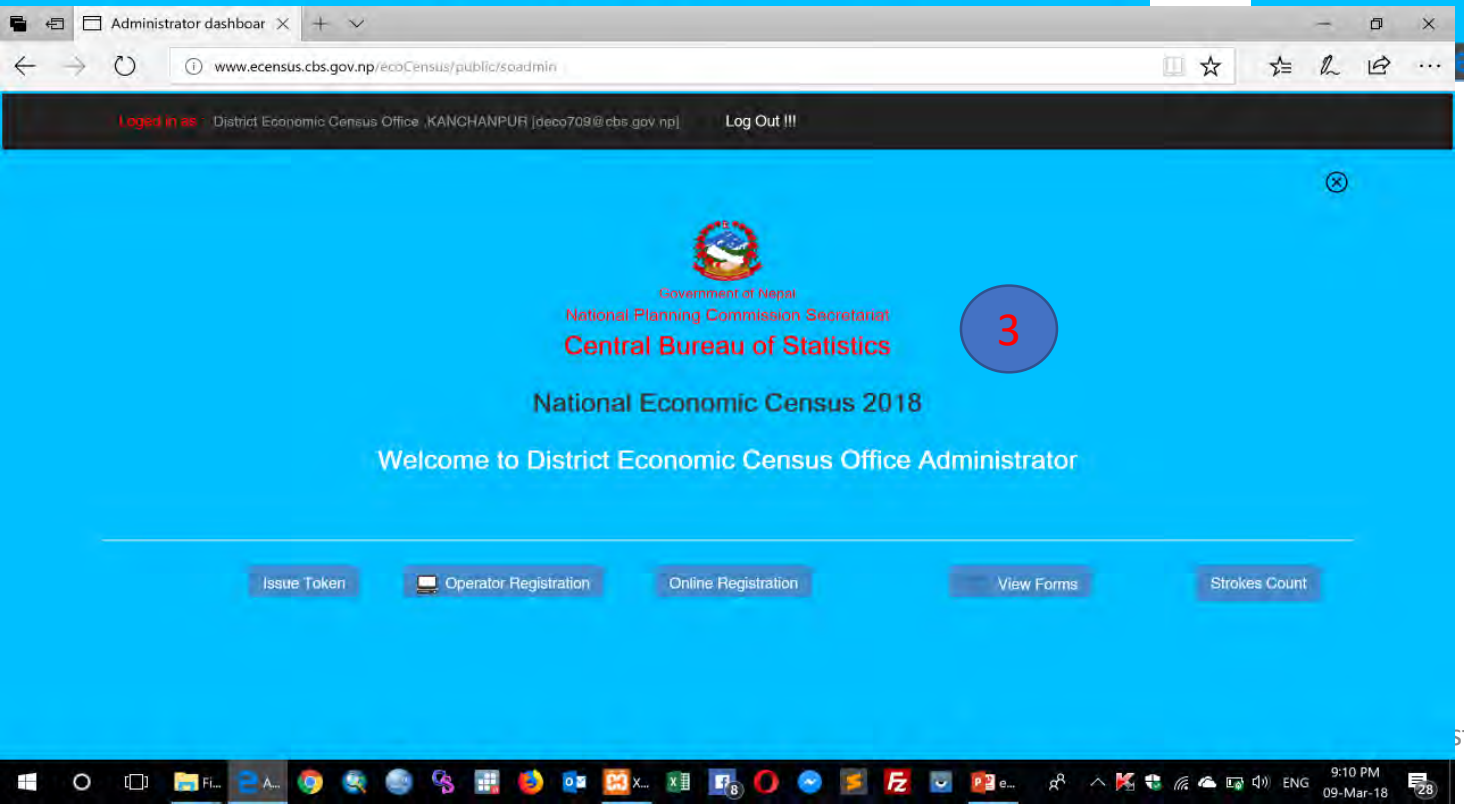
- Provision of Dashboard System linking with District Economic Census Offices
  - Central Level Dashboard authorized for Central Core Team
  - 77 District Level Dashboard System (District Economic Census Offices)




e-Census Nepal
www.ecensus.cbs.gov.np/
Dashboard
How to Register
Download Manual
Select Language :
Nepali
English
This is test Page Under Construction !!!
नेपाल सरकार
केन्द्रीय तथ्यांक विभाग
राष्ट्रिय आर्थिक गणना २०७५
प्रश्नावली B
यस प्रश्नावलीमा सोधिएका विवरण तथ्यांक ऐन, २०१५ अनुसार गोप्य रहने छन् । कुनै पनि व्यावसायको विवरण व्यक्तिगत रूपमा प्रकाशनमा ल्याइने छैन । सामूहिक रूपमा तथ्यांकीय प्रयोजनको लागि मात्र प्रयोग गरिने छ ।
यस प्रश्नावलीका विवरण संकलन कार्य २०७५ साल वैशाख १ गतेबाट सुरु गर्नुपर्दछ ।
सबै अंकहरु अंग्रेजीमा मात्र लेख्नुपर्दछ ।
नोट - यदि तपाई दर्ता हुनुभएको छैन भने पहिले दर्ता गरि प्रवेश गर्नुहोस् ।
प्रवेश गर्नुहोस्
नया दर्ता गर्नुहोस्
सम्पर्क ठेगाना: रामशाह पथ, थापाथली, काठमाण्डौ
फोन नम्बर: ०१-४१००५२४,
फ्याक्स: ९७७-०१४२२७७२०
वेब साइट: www.cbs.gov.np
Page visited: 6059 times.


administration
www.ecensus.cbs.gov.np/ecoCensus/admin/frmAdmin
Government of Nepal
National Planning Commission Secretariat
Central Bureau of Statistics
National Economic Census 2018
Administrator Log In
User Id:
User Id here...
Enter Password :
User Password...
User Type:
--Select user type--
Reset
Login
1


Administrator dashboar
www.ecensus.cbs.gov.np/ecoCensus/public/dashboard
Log Out !!!
Government of Nepal
National Planning Commission Secretariat
Central Bureau of Statistics
National Economic Census 2018
Welcome to District Economic Census Office Admin Dashboard
Administrator
Data Entry
2
ENG
9:09 PM
09-Mar-18


Administrator dashboar
www.ecensus.cbs.gov.np/ecoCensus/public/soadmin
Log Out !!!
Government of Nepal
National Planning Commission Secretariat
Central Bureau of Statistics
National Economic Census 2018
Welcome to District Economic Census Office Administrator
Issue Token
Operator Registration
Online Registration
View Forms
Strokes Count
3
ENG
9:10 PM
09-Mar-18

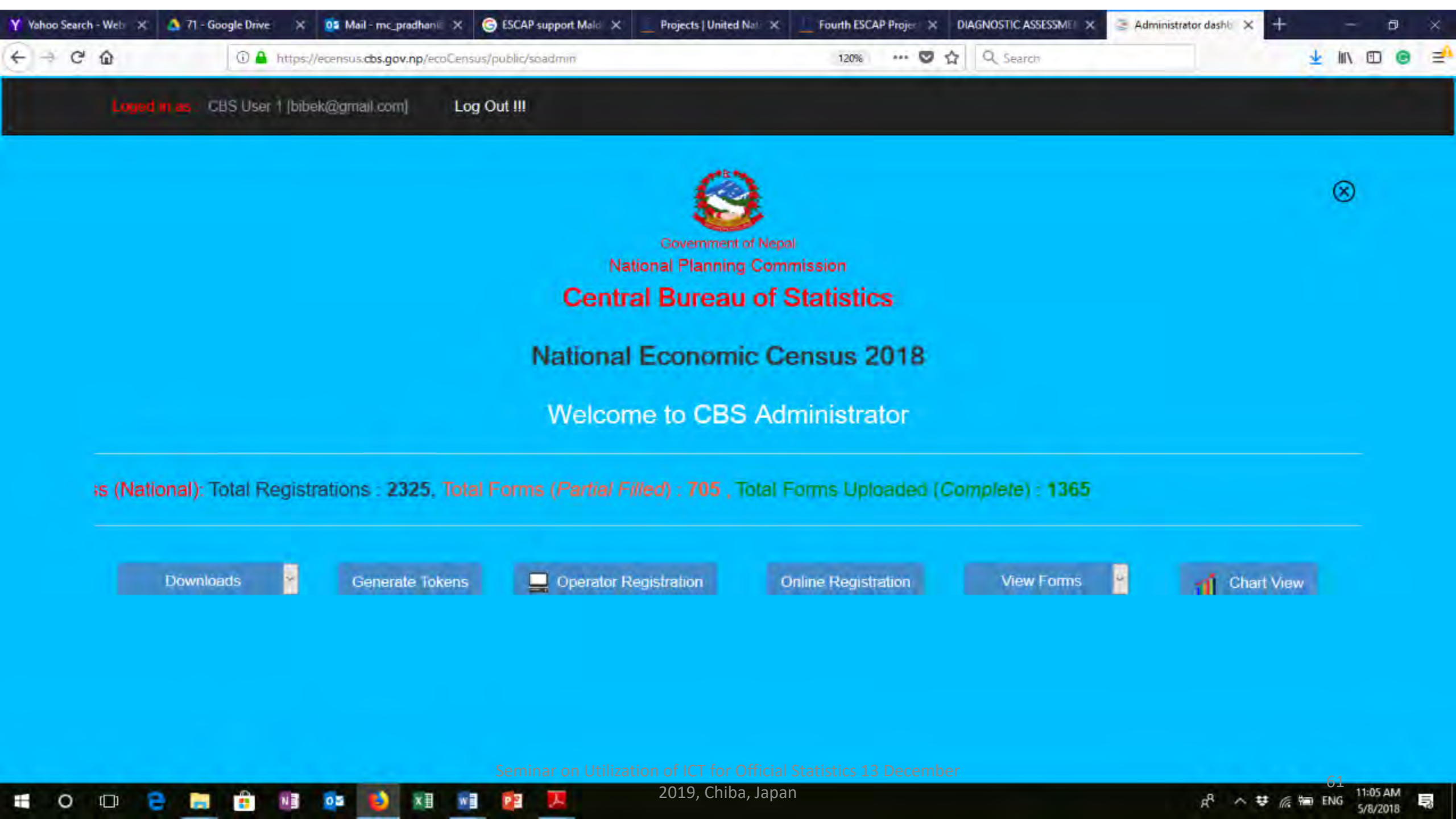

Yahoo Search - Web
71 - Google Drive
Mail - mc_pradhan
ESCAP support Mail
Projects | United Nat
Fourth ESCAP Proje
DIAGNOSTIC ASSESSME
Administrator dashb
https://ecensus.cbs.gov.np/ecoCensus/public/soadmin
120%
Search
Loged in as: CBS User 1 [bibek@gmail.com]
Log Out !!!
Government of Nepal
National Planning Commission
Central Bureau of Statistics
National Economic Census 2018
Welcome to CBS Administrator
s (National): Total Registrations : 2325, Total Forms (Partial Filled) : 705 , Total Forms Uploaded (Complete) : 1365
Downloads
Generate Tokens
Operator Registration
Online Registration
View Forms
Chart View
ENG
11:05 AM
5/8/2018

Chart-1 Total Online Registration (By Districts)
600
450
300
150
0
102 104 105 106 108 109 110 111 112 113 114 201 202 204 205 206 208 301 302 303 304 305 306 307 308 309 310 311 312 313 401 404 405 406 407 408 409 410 411 503 504 505 506 507 508 509 510 511 512 602 604 606 607 608 609 610 703 704 705 707 708 709

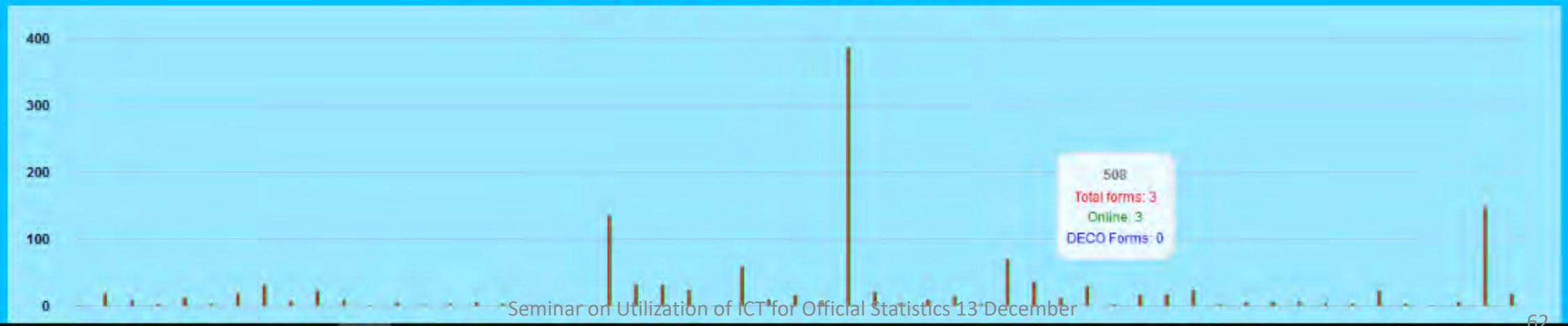


Chart-2 Total Forms uploaded (By Districts and Type)
400
300
200
100
0
508
Total forms: 3
Online: 3
DECO Forms: 0

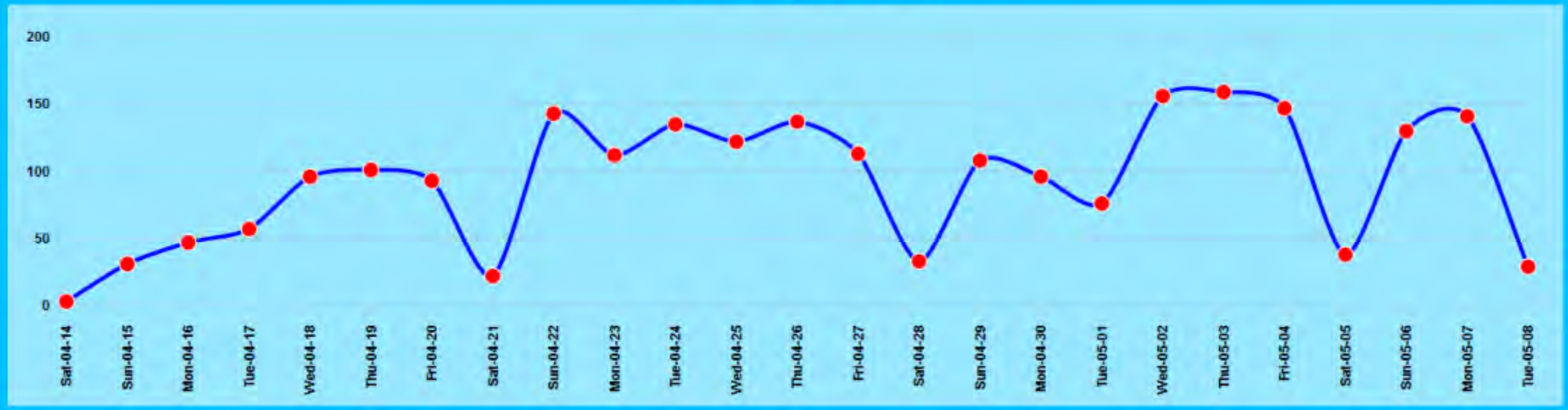


Chart-3: Online Registration (per day)
200
150
100
50
0
Sat-04-14
Sun-04-15
Mon-04-16
Tue-04-17
Wed-04-18
Thu-04-19
Fri-04-20
Sat-04-21
Sun-04-22
Mon-04-23
Tue-04-24
Wed-04-25
Thu-04-26
Fri-04-27
Sat-04-28
Sun-04-29
Mon-04-30
Tue-05-01
Wed-05-02
Thu-05-03
Fri-05-04
Sat-05-05
Sun-05-06
Mon-05-07
Tue-05-08

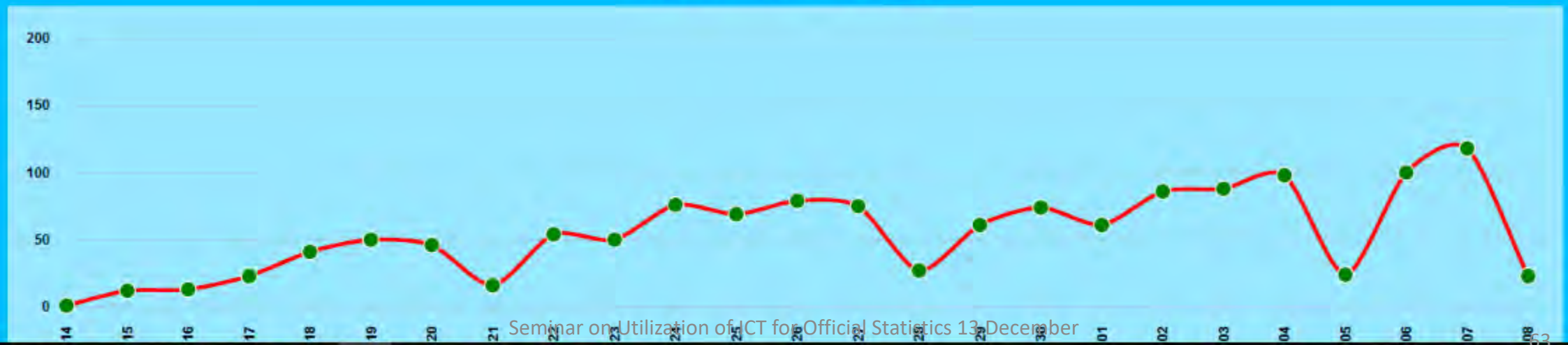


Chart-4: Forms Uploaded (per day)
200
150
100
50
0

Close [X]

Central Bureau of Statistics

National Economic Census 2018

List of Online Forms submitted

Show 10 entries Search:

No.	District code	Urban/Rural Municipality Code	Ward No.	Enumeration Area(EA)	Sub-Enumeration Area(SEA)	Form SN	Establishment ID	Total Employee	Employee(Male)	Employee(female)
1	201	13	03	001	001	001	2011303001001001	4	2	2
2	205	04	05	018	001	001	2050405018001001	6	3	3
3	312	06	05	010	001	004	3120605010001004	3	3	0
4	708	13	01	010	001	014	7081301010001014	7	6	1
5	309	04	07	047	002	003	3090407047002003	1227	712	515
6	511	06	03	005	001	001	5110603005001001	59	0	59

ENG 11:07 AM 5/8/2018

5-B.3: ICT as a Means of Progress Monitoring of Data Collection

National Economic Census 2018

Progress Report

Sn	Dist_code	Paper	Tablet	e_Census	Total	Date
2	304	2150	0	1	2151	2018-04-29
4	411	3109	108	5	3222	2018-04-29
7	303	350	0	0	350	2018-04-29
8	512	7555	0	3	7558	2018-04-29
14	310	1900	0	1	1901	2018-05-02
15	105	1951	0	10	1961	2018-05-02
21	509	4200	0	15	4215	2018-05-03
23	511	10270	0	20	10290	2018-05-03

5-C. Utilization of ICT in Post Census Phase

- PAPI Data Processing and data Upload
- Data Dissemination

5-C.1: PAPI- Data Processing

Decentralised data editing, coding and entry of the filled-in paper-based questionnaires via 33 statistics offices and Central Bureau of Statistics (CBS).

Use of CSPro web-based data entry application

CSPro 7.1/ 7.0/6.3 *(CSEntry Android Application)*

Connection with Main Server Government Integrated Data Centre (GIDC) in Kathmandu.

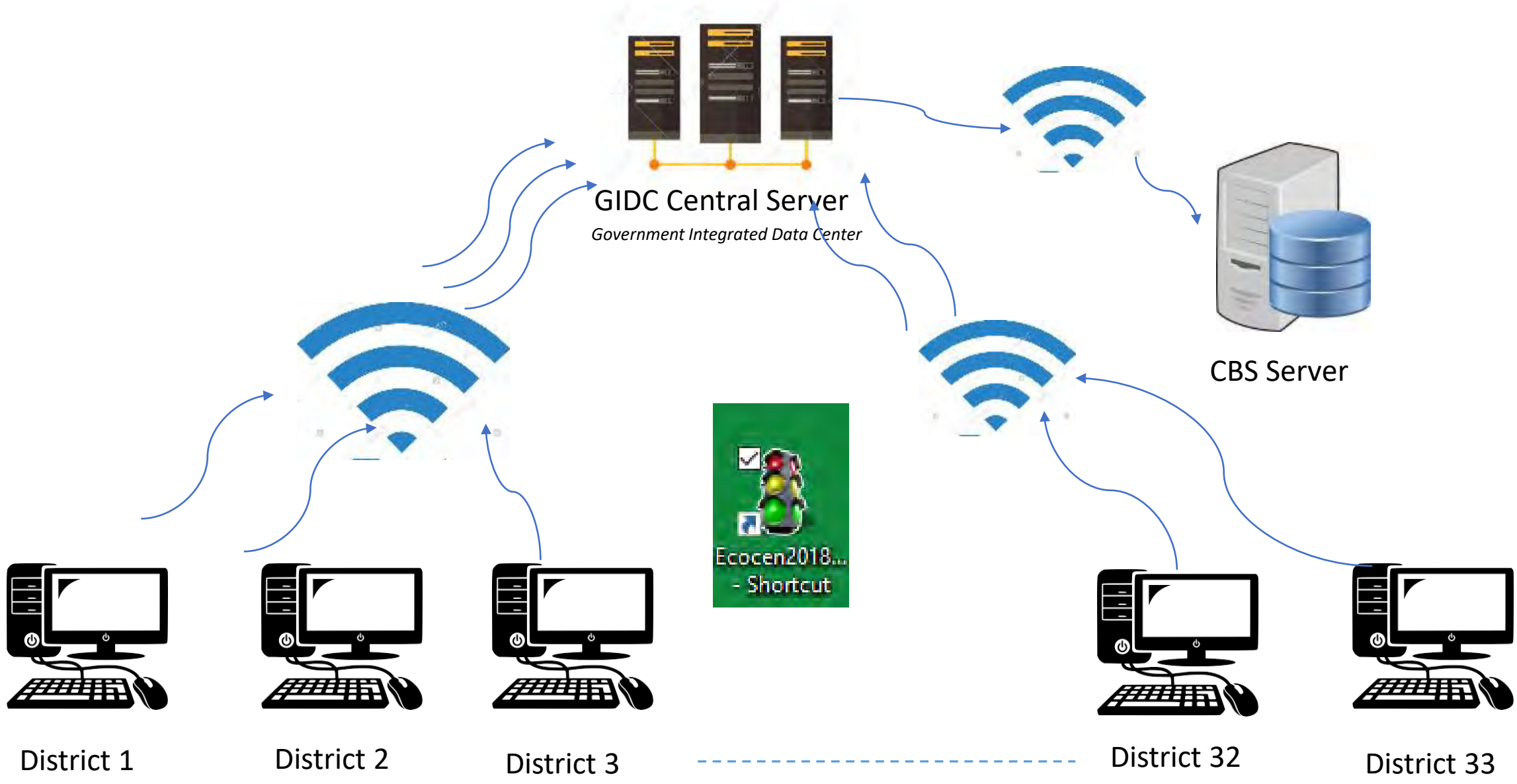
Provision of backup servers at CBS.

Data upload and Synchronization system to the Main Server

5-C.1: Method of Sending Paper Data

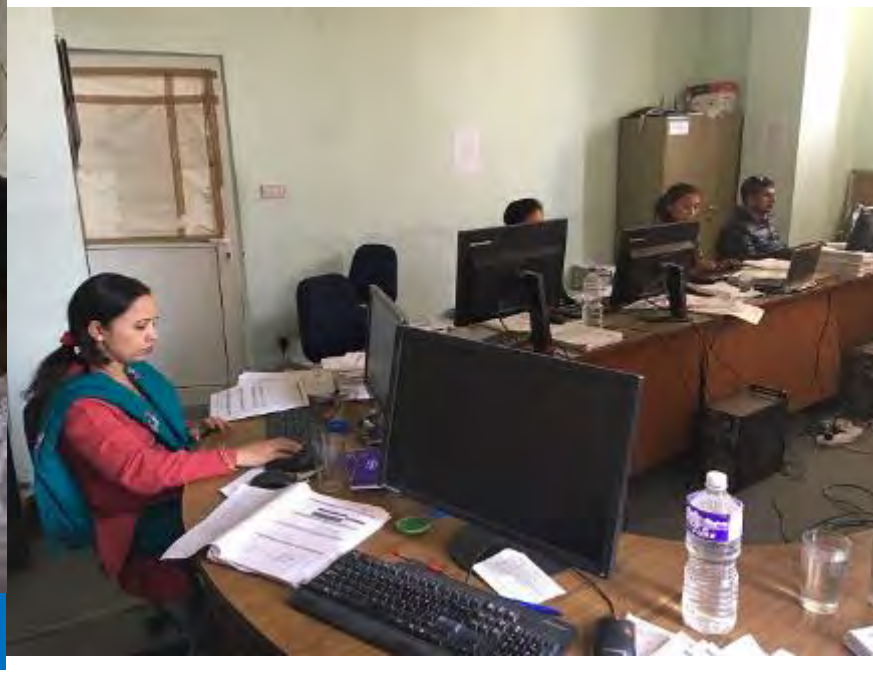
1. **CSPro data entry application:**
    1. **Economic Census** Data Entry Application

2. Using **Synchronization** : Data Submission to Server (https://nc.gcloud.gov.np)
3. **Alternate : e-Census/ Dashboard**

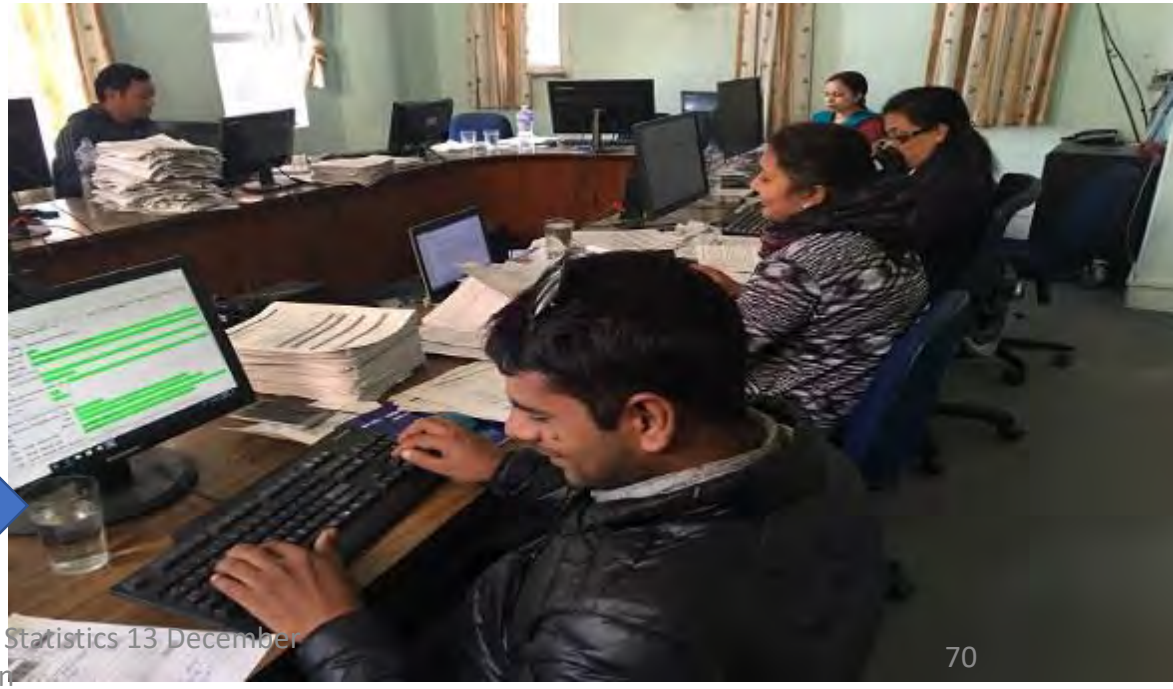

GIDC Central Server
Government Integrated Data Center
CBS Server
Ecocen2018...
- Shortcut
District 1
District 2
District 3
District 32
District 33

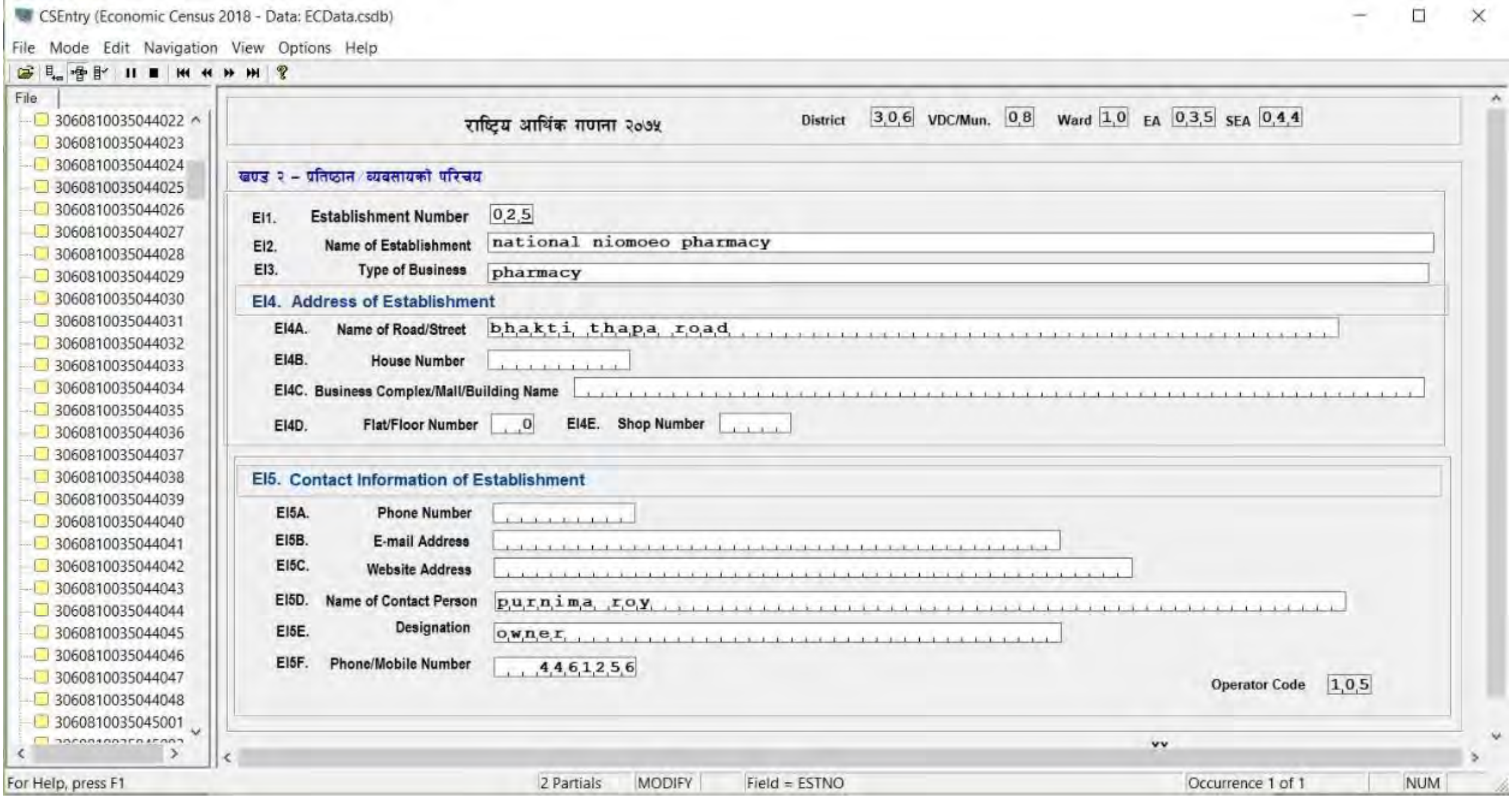
Paper based enumeration

Economic Census Data Editing and Coding



Paper base filled in questionnaire- Data Entry




CSEntry (Economic Census 2018 - Data: ECData.csdb)
File Mode Edit Navigation View Options Help
File
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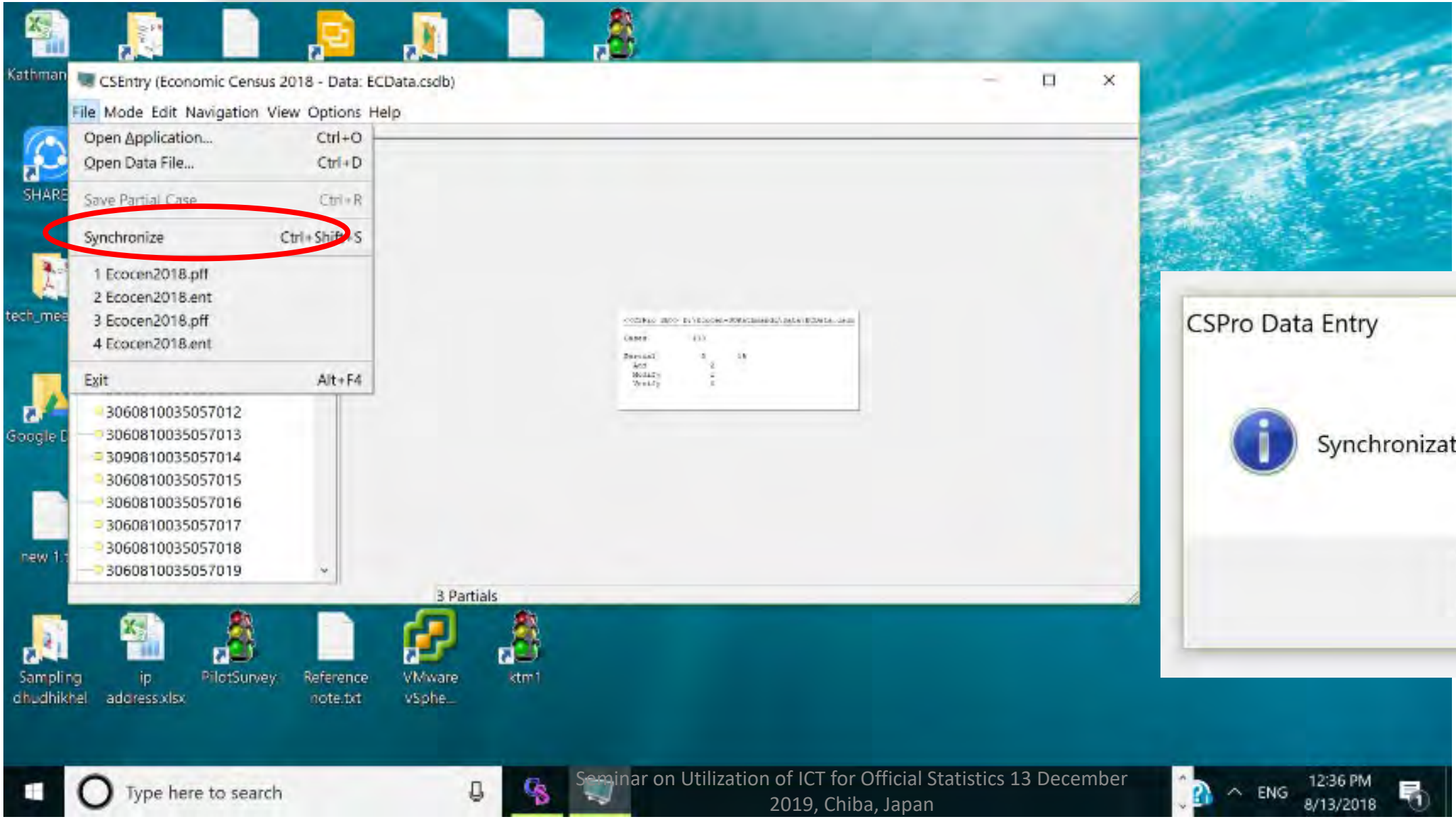
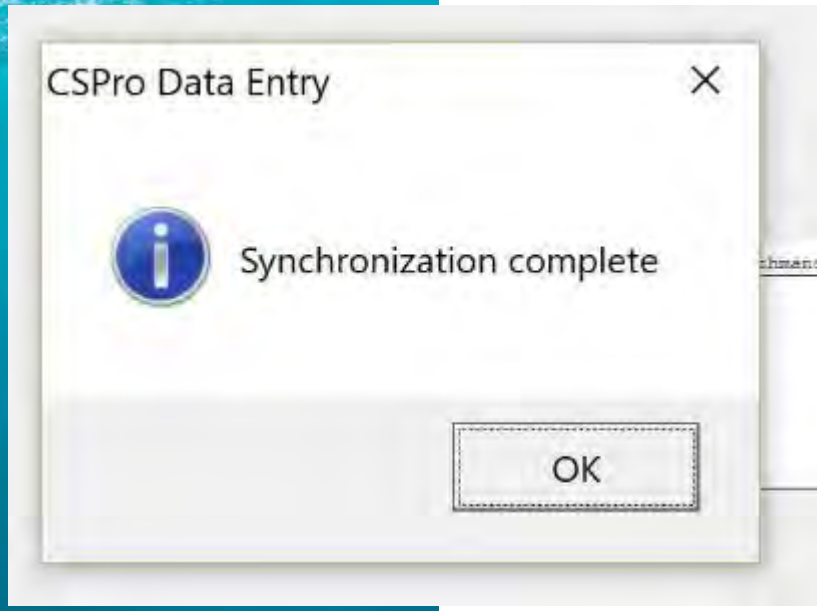
राष्ट्रिय आर्थिक गणना २०७५
District 3 0 6 VDC/Mun. 0 8 Ward 1 0 EA 0 3 5 SEA 0 4 4
खण्ड २ – प्रतिष्ठान/व्यवसायको परिचय
EI1. Establishment Number 0 2 5
EI2. Name of Establishment national niomoeo pharmacy
EI3. Type of Business pharmacy
EI4. Address of Establishment
EI4A. Name of Road/Street bhakti thapa road
EI4B. House Number
EI4C. Business Complex/Mall/Building Name
EI4D. Flat/Floor Number 0
EI4E. Shop Number
EI5. Contact Information of Establishment
EI5A. Phone Number
EI5B. E-mail Address
EI5C. Website Address
EI5D. Name of Contact Person purnima roy
EI5E. Designation owner
EI5F. Phone/Mobile Number 4461256
Operator Code 1 0 5
For Help, press F1
2 Partials
MODIFY
Field = ESTNO
Occurrence 1 of 1
NUM

Upload Data to CBS Server





5-C.2: Utilisation of ICT in Data Dissemination

- **Mode of Publications**
  - Hard Copy
  - Softcopy (Digital Copy)
- **Mode of Dissemination**
  - Seminar (Visual Display of Results)
  - Hard Copy Distribution
  - Softcopy Distribution
  - Upload in websites
    - https://cbs.gov.np/economic-census/
    - https://nada.cbs.gov.np/
    - http://nationaldata.gov.np/StaticReport?tgId=2001&tsgId=1008&tid=6024
    - https://www.stat.go.jp/english/info/meetings/nepal/d21_report_list.html

- **Disseminated Publications**
  - Preliminary Reports
  - National Report 1-1 by Industry
  - National Report 1-2 by Size of Persons Engaged
  - Provincial Reports
  - Excel Tables of published Reports

https://cbs.gov.np

Government of Nepal
National Planning Commission
Central Bureau of Statistics

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Headlines » National Economic Census 2018 Press Release 21st N

What's New

- National Economic Census-2018, National Report 1-2 NEW
- National Economic Census-2018, Provincial Report NEW
- GIS Interview Result NEW
- National Population Census Operation and Managment directives, 2076 NEW

nationaldata.gov.np/StaticReport?tgId=2001&tsgId=1008&tid=6024

Government of Nepal
National Planning Commission
Central Bureau of Statistics

National Data Profile

Export To Excel

Industries Types (Number)

District	Year	Agriculture, forestry and fishing	Other service activities	Mining and quarrying	Manufacturing	Electricty gas and water	Construction	Wholesale and retail trade	Accommodation and food	Information and communications	Financial intermediation and insurance	Transport and storage	Administrative and support service activity	Education	Health and social work	Art, entertainment and recreation
Taplejung	2018	284	601	1	442	48	22	1606	457	3	131	59	23	395	401	105
Sankhuwasabha	2018	397	438	2	604	25	22	2891	634	10	130	26	13	435	351	18
Solukhumbu	2018	83	246	0	233	14	4	1223	1212	4	64	26	8	244	122	19
Okhaldhunga	2018	168	285	0	367	22	8	2151	483	12	119	37	21	361	241	11
Khotang	2018	509	166	0	489	33	8	1743	487	6	72	71	45	509	144	11
Bhojpur	2018	335	217	0	428	6	2	1724	468	5	153	33	8	389	283	6
Dhankuta	2018	388	340	0	683	5	14	2545	1070	26	186	28	10	382	215	15
Tehrathum	2018	256	184	11	530	11	29	1430	330	9	124	28	7	272	117	32
Panchthar	2018	109	358	1	688	34	12	2719	615	13	156	32	20	492	106	35
Ilam	2018	225	574	1	1309	18	6	4955	1464	23	171	28	42	539	199	18
Jhapa	2018	436	2579	6	4318	12	11	22330	6045	82	604	94	294	1018	501	58
Morang	2018	290	2374	9	4081	10	16	20344	5134	84	606	86	216	1084	506	57
Sunsari	2018	318	2175	24	3836	6	17	17443	4828	87	488	93	212	1154	402	73
Udayapur	2018	608	919	5	1372	24	107	5920	1042	28	231	35	45	593	384	16

6. Good Experiences, Problems and Challenges

6-1: Good Experiences

- First government introduced online census operation/ Received cooperation from respondents
- Use of CSPro 7.0 web-based application
- Link to Government's Integrated Data Center (GIDC)/ Backup Server at CBS/ Security ensured
- Guidelines with examples in e-census / A census hotline (toll free phone)
- Possibility of replacement of paper base data collection by tablet and e-census in future similar census and surveys
- Media Informed respondents responded positively
- Effective Tablet based data collection
- E-census specially focussed with special task group made a high response rate/ respondents enthusiastic/ Making accountable to respondents as well as field officials
- More participation of ICT know how and young respondents
- Easy and Effective monitoring Monitoring from dash board/ Handling Errors in data possible via online dashboard system

6-1: Good Experiences

- Online form entry, tablet entry and control form entry (*for preliminary results)*
- Freedom to response questionnaire in convenient time
- Help desk facilitate to clarify problems to fill the questionnaire
- Printing and transportation cost of questionnaires and manuals reduced.
- Cost efficiency and reduced the workload of enumerators.
- Formation of Follow-up team encouraged respondents to respond via e-census like Kaski District and Kailali
- Successful implementation of the decentralised PAPI data entry system and web-based upload system
- Future Prospects: Saving of resources and time for enumeration

6-2: Problems

- Not-sufficient time allocation for ICT based enumeration method in five days during training period
- Not all districts covered in online census (No e-census uploads in 9 Districts)
- CAPI (Tablet) data collection only in few districts (14) / Very limited number of tablets as a constraint to adopt CAPI based data collection
- Follow up for filling up the questionnaire via e-census : More time consuming
- Statistical illiteracy: suspect as tax imposition work / Time consuming to make literate on how to fill e-census questionnaire
- Capacity constraint in using ICT by the enumerators: Low response of e-census.
- Poor coverage and low network speed of internet in the remote area
- Not willing to participate in e-census due to inaccessibility of internet or capacity constraint.

6-2: Problems

- Lack of computer and internet use skill made low response of e-census.
- Some respondents usually forgetting user ID and password
- Low response via e-census where respondents' statistical literacy was low,
- Lack of Follow-up team and Live Help desk
- Shortage of IT team with a number of IT officials or technical human resources
- High Registration Numbers but Low Upload Number (70%)
- Low Confidence in filling the form in some cases / Needed field officials' support while filling the e-forms
- Missing Token Pass or User ID and Password they created
- Drop out the filling questionnaire if the contents are not well understood
- Some respondents of unregistered establishments not willing to participate due to fear of tax imposition
- Weak publicity focusing to ICT based enumeration may made low response

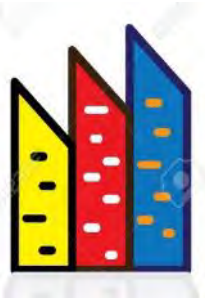
6-2: Problems

- Less priority of e-census enumeration due to target number of respondents to be filled in by each enumerator via e-census was not set or given.
- Electricity break or internet obstacles (low speed or break) problems in some cases caused to demotivate in participating.
- Discouraged due to not understanding technical terms or terminology in the questionnaires and left to response on revenue or sales and expenses questions

6-3: Challenges

- **Mobilising a huge budgetary resource to replace traditional approach by tablet and e-census approach.**
- **Conduct a statistical literacy programs**
- **Capacity development of dedicated team**
- **Reducing Respondent burden**
- **Getting adequate time from the busy business respondents**
- **Extensive media campaigning**
- **Geographic remoteness for conducting e-census**
- **Retain Back-up power of tablet**
- **Completeness of response**
- **Deal with fake response/ Possibility of fake response in case of weak control or security system**
- **Create trust to Census operation for the confidentiality of Information and assurance that no any tax or penalties will be imposed**

7. National Economic Census 2018 Results



(Total Number of Establishment)

923,356

(Total Persons Engaged)

32,28,457

(Male)

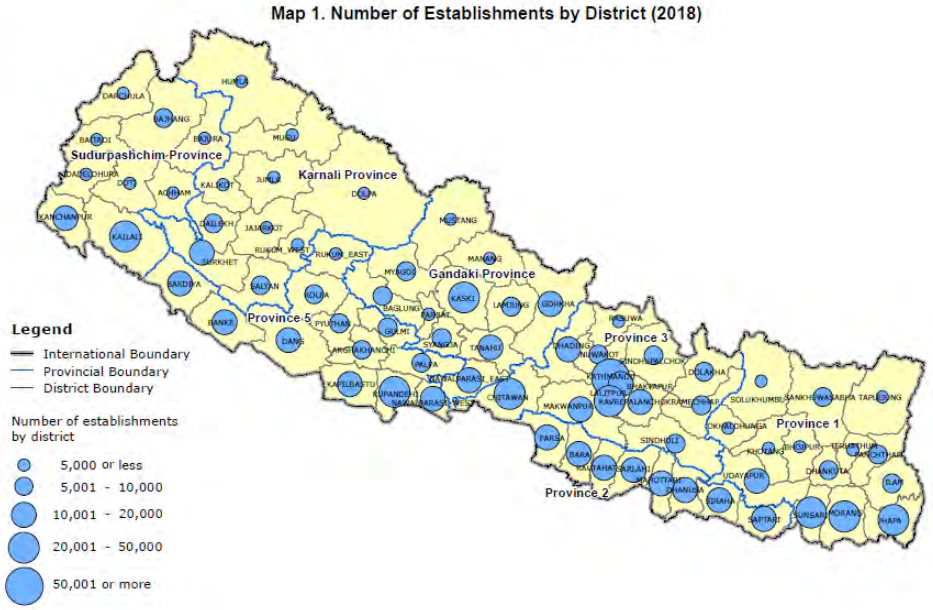
20,12,237

(62.3%)

(Female)

12,16,220

(37.7%)



8.Conclusion

- Integration of Traditional and ICT modalities of data collection namely paper-based questionnaires, tablet and e-census : a successful experimentation in the census.
- Stepped up in technological advancement
- Shifting from paper-base to tablet or online survey: a challenging task to implement in the country.
- E-census, specially focussed with special task group make a high response rate in some districts.
- Introduced CAPI/ effective/ Future prospects
- Application of ICT based census along with statistical literacy or awareness has prospects for cost effective statistical operation with high quality statistics.

THANK YOU