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**Standard Protocol Covering the Approach & Process
for
Seeding Aadhaar Numbers
in Service Delivery Databases**

**June 2015
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Abbreviations Used

| Abbreviation | Description |
|-------------------|--|
| EID Number | <p>Enrolment ID number is a 28 character acknowledgment number issued by UIDAI at the time of enrolment containing a series with date and time stamp. Sample image below:</p>  <p>Figure 1: Sample Image of EID</p> |
| IFSC Code | The Indian Financial System Code is 11 character code for identifying the bank and branch which an account is held used both by the NEFT, RTGS and IMPS finance transfer systems. |
| IVRS | Interactive Voice Response System |
| MGNREGS | Mahatma Gandhi National Rural Employment Guarantee Scheme of Ministry of Rural Development, Government of India |
| NSAP | National Social Assistance Program of Ministry of Rural Development, Government of India |
| SMS | Short messaging service available in mobile network |

Introduction

Aadhaar seeding is a process by which Aadhaar numbers of residents are included in the service delivery database of service providers for enabling de-duplication of database and Aadhaar based authentication during service delivery. The objective of de-duplication is not to replace the currently used unique identifier of the customers/ residents/ beneficiaries with Aadhaar but it is to clean up the databases for any ghosts / duplicate entries and seamlessly enable Aadhaar authentication without impacting any other interface that the service providers maintain with their customers.

Further, as Aadhaar number is unique and does not change over the lifecycle of an individual, the 12-digit Aadhaar number is sufficient enough to transfer any payments to an individual. Today, in order to transfer money to a beneficiary, the Government/ Institution needs to know the bank account, IFSC Code, and bank branch details etc. which is prone to change, hence requiring administrative efforts on recording, maintaining and dealing with complaints arising out of this. However, Aadhaar offers the possibility of sending government payments by using just the 12-digit Aadhaar number for life, which makes government payments agnostic to any changes in the bank account of the individuals, hence reducing the administrative burden.

It is expected that the Aadhaar Seeding exercise shall be carried out across the country in various service delivery databases over time. It is important to note that whether the seeding is done by department's own people or it is outsourced, ***the responsibility of correct seeding shall always stay with the department, who is the owner of the database.*** This document aims to provide general guidelines for Aadhaar seeding.

I. Pre-requisites for Aadhaar Seeding

In order to initiate the process of Aadhaar Seeding, following are the pre-requisites:

1. **Digitization** of existing beneficiary data which currently exist either in silo databases, or in a handwritten manner;
2. **Scheme application should be centralized** at Ministry / State Level. For example, for MGNREGS, the Ministry has developed and deployed NREGASoft application which is used for Wage List generation, as well as for comprehensive MIS reporting;
3. **Aadhaar Enrollment** of beneficiaries. The beneficiary could have an Enrolment ID (28 digits including date & time stamp) or a 12-digit Aadhaar number. (Please see sample in Annexure I);
4. Provision of Aadhaar number (12-digit) and EID number (28-digit) **data entry field in the database** with the following checks in-built in the software;
 - a. Aadhaar number will always consist of 12 digits;
 - b. Aadhaar number cannot start with 0 & 1;
 - c. Aadhaar number structural validity should be checked by use of Verhoeff algorithm (URL : http://en.wikipedia.org/wiki/Verhoeff_algorithm);
 - d. EID Number is 28 digit with following format: 12341234512345yyyyymmddhhmmss

II. Aadhaar Seeding

Seeding initiatives could be of many types referred to here as ‘channels’ which provide the source of seeding such as SMS or Online based resident/ assisted self-seeding, manual seeding at point of service, algorithmic seeding etc. The channels for Aadhaar seeding may be categorized in two categories based on source of data:

- Manual / Bottom-up / **Organic** Aadhaar Seeding;
- Algorithmic / Top-Down / **In-Organic** Aadhaar Seeding;

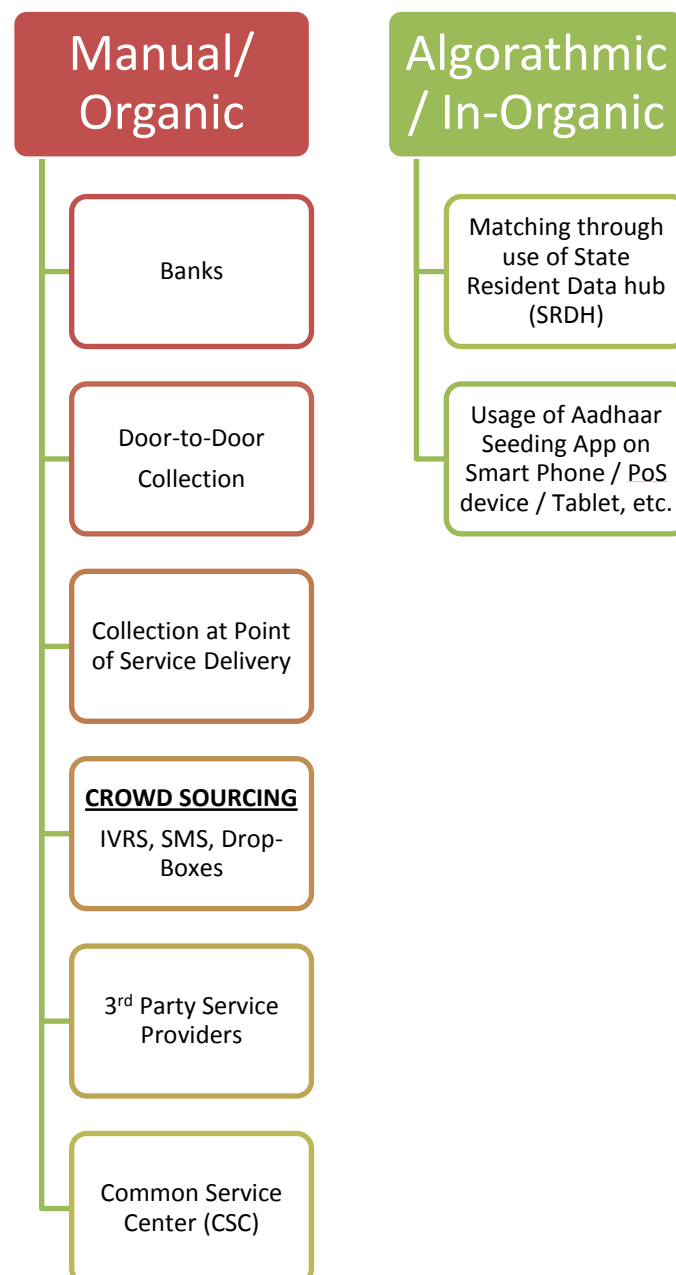
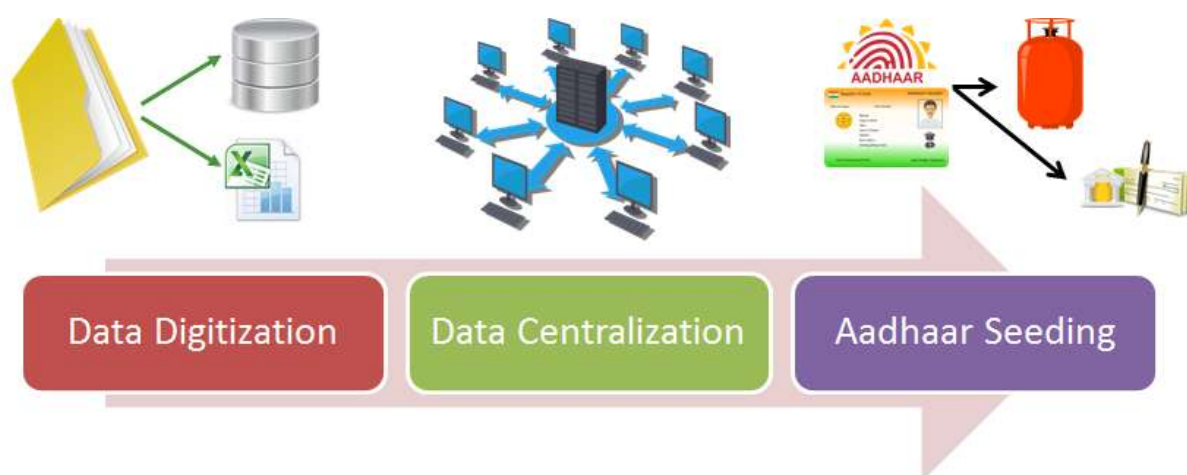


Figure 2: Channels of Aadhaar Seeding

Regardless of the channel adopted for Aadhaar seeding, there are 3 steps in the entire process:

- Data Digitization;
- Data Centralization;
- Aadhaar Seeding;



Data digitization may be done using existing Department Data (through use of physical Aadhaar letters / e-Aadhaar print outs / e-KYC).

- Data Centralization does not necessarily mean collating all data at one physical location.
- Software application users with authorized access should be able to access data online in a seamless fashion while providing service benefit to residents.

Aadhaar Seeding and Data centralization do not follow any particular order, and any activity may precede another, or both activities may run in parallel.

Figure 3: Steps for Aadhaar Seeding

Inorganic Approach to Aadhaar Seeding

Feature of Inorganic Seeding are:

- Seeding is done without the involvement of the beneficiary
- Involves electronic matching of 2 data sets – one of Aadhaar and other of service provider.
This typically requires following datasets:
 - Digitized database of beneficiaries
 - KYR+ data from enrolment agencies
 - EID-UID database created with the help of EID-UID XML file received from UIDAI (CIDR)
- Database is updated with UID by programming tools

While the process of “Electronic Matching” of records appears to be a simpler one, it has following challenges:

- Lack of digitization of beneficiary records;
- Lack of standardization in Name and Address records;
- Incompleteness of data, like missing Pin code/ Postal Code;

The process of matching two datasets electronically becomes very difficult. Further, even if the program is modified to meet the requirement; the number of “**Probable**” matches is huge, which subsequently has to be verified in field. Essentially, the Aadhaar Seeding process becomes a multi-step process and time consuming. Therefore, for Aadhaar Seeding in the districts, it is recommended that a “Manual” approach is adopted which will ensure 100% correctness of Aadhaar Seeding in one-step.

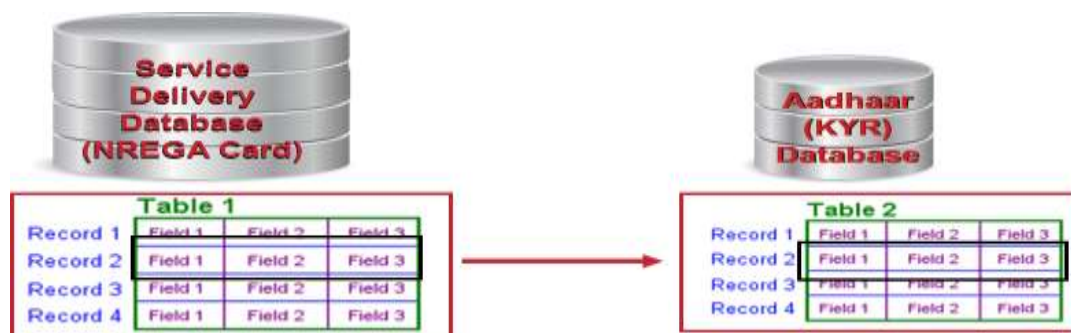
To elaborate the above with an example: Laxmi can be written in multiple wayssuch as Laxmi, Lakshmi, Laksmi, Lakshmi. A slight difference in spelling of this record will lead to rejections. Similarly one can easily find atleast 2 dozen females named Laxmi in a small village of 1000 people in Andhra Pradesh, so the probable matches go up with larger databases.

Jamuna Devi has an NREGA job card. Her NREGA ID number was taken as KYR+ field In Aadhaar at the time of enrolment.

| KYR+ Table built using EID-UID files | | | | | | |
|--------------------------------------|------------|--------------|-----|-----------|-----------------------|-------------------------|
| UID | EID | Name | Age | DoB | Address | MGNREGA Job Card Number |
| 345678533343 | 232545 | Birsa Oraon | 33 | 13-Jan-89 | P.O.Charhat, Dehradun | TR-04-005-010-001/10 |
| 675423876532 | 897364.... | Jamuna Devi | 45 | 18-May-66 | P.O.Charhat, Dehradun | TR-04-005-008-001/101 |
| 984328874573 | 662374.... | Anita Khatwa | 35 | 18-Jul-76 | P.O.Charhat, Dehradun | TR-04-005-010-002/103 |
| 972735481296 | 862736.... | Parvati Devi | 33 | 21-Jan-78 | P.O.Charhat, Dehradun | TR-04-005-010-001/104 |

| MGNREGA Database | | | | | | | |
|-----------------------|-------|-------------|-----------|----------------|--------------|-----------|-----------|
| Job Card Number | UID | Name | DoB | Panchayat Code | Applicant No | Bank Code | Bank Name |
| TR-04-005-008-001/10 | | | | 3004005008 | ..... | ..... | ..... |
| TR-04-005-008-001/100 | | | | 3004005008 | ..... | ..... | ..... |
| TR-04-005-008-001/101 | | Jamuna devi | 18-May-66 | 3004005008 | ..... | ..... | ..... |
| TR-04-005-008-001/102 | | | | 3004005008 | ..... | ..... | ..... |
| TR-04-005-008-001/103 | | Hari Das | 11-May-82 | 3004005008 | ..... | ..... | ..... |
| TR-04-005-008-001/104 | | | | 3004005008 | ..... | ..... | ..... |
| TR-04-005-008-001/104 | | | | 3004005008 | ..... | ..... | ..... |
| TR-04-005-008-001/105 | | | | 3004005008 | ..... | ..... | ..... |
| TR-04-005-008-001/105 | | | | 3004005008 | ..... | ..... | ..... |
| TR-04-005-008-001/106 | | | | 3004005008 | ..... | ..... | ..... |

Figure 4: Inorganic seeding: A screen shot illustration of database comparison



1. Compare one or more KYR and KYR+ fields in Aadhaar database and service delivery database
2. Upon finding a match, seed Aadhaar number to service delivery database

Figure 5: Inorganic seeding - Back end record matching

Organic Approach for Aadhaar Seeding

Based on the scheme, frequency of addition of new beneficiaries and / or frequency of renewal of whole database, the strategies for Aadhaar seeding have to be customized. However, as mentioned in the earlier section, in order to carry out the Aadhaar seeding in a seamless manner in the districts, a multi-pronged strategy has to be followed. Therefore, UIDAI has the following suggestions for Aadhaar seeding through:

- a. Banks
- b. Door-to-Door Campaign (Scheme-wise)
- c. Collection of Aadhaar number at Point of Service Delivery
- d. Crowd Sourcing
- e. 3rd Party Seeding Service Providers
- f. Common Service Center by using Aadhaar e-KYC service/Aadhaar Authentication Service

Seeding at Banks

Irrespective of the Scheme and the geography, as the Aadhaar Number of a given Beneficiary finally has to be linked with the Bank Account, Banks play a strategic and key role in Seeding. Given various channels of Banking, following are the various options of Aadhaar seeding at Banks:

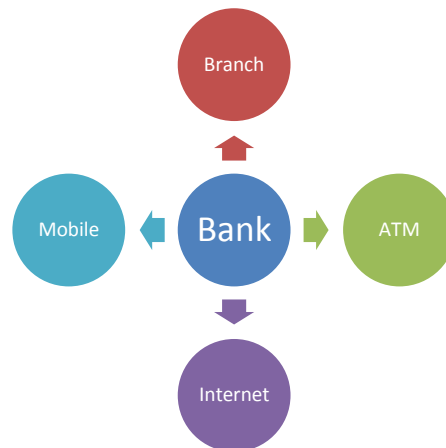


Figure 6: Channels for Bank Seeding

(i) Branches

A Branch of a Bank remains to be the traditional touch point for availing Banking services for the residents. Owing to this familiarity factor, the residents can capitalize on the option of seeding the Aadhaar Number to the Bank Account at the Bank Branch. The process could be as simple as filling the Seeding Request Form with the Bank Account Number and Aadhaar number. The filled form, along with the self-attested copies of the Bank Passbook and the Aadhaar letter can either be handed over to the Bank Official or dropped in the Drop-box for further updation in the CBS.

(ii) ATMs

Considering the fact that there are about 1.5 Lakh ATMs available in the country and the number of daily footfalls across the same, the ATM is a highly potential and practical option for Organic Seeding by the residents. With a conservative estimate of 10 Seeding Requests per ATM on a daily basis will lead into 4.5 Crore Seeding requests in a month!

Using a menu driven self help mode, a resident can enter the Aadhaar number in the ATM that can be seeded in the CBS, subject to successful authentication on the spot. Alternately, the seeding request can be forwarded to the Bank and the same may be processed subsequent to a successful authentication.



Figure 7: Seeding using a Bank ATM

Indicative Step-by-Step Process of Seeding at ATM:

| | |
|-------------------|--|
| Step 1 | Resident swipes the ATM Card |
| Step 2 | Resident enters the PIN |
| Step 3 | Resident chooses the option of Seeding from the Menu |
| Step 4 | Resident enters the Aadhaar Number |
| Step 5 | Resident re-enters the Aadhaar Number |
| Step 6 (Optional) | Using the Secured Protocol, the entered Aadhaar Number gets Authenticated |
| Step 7 | Seeding Request is sent to the Bank's Server for further updation in the CBS |

(iii) Internet Banking

Yet another channel pertaining to Banking is the Internet. Owing to the convenience of accessing the Internet Banking, the resident can forward the Seeding Request to the Bank for the process at the back end.

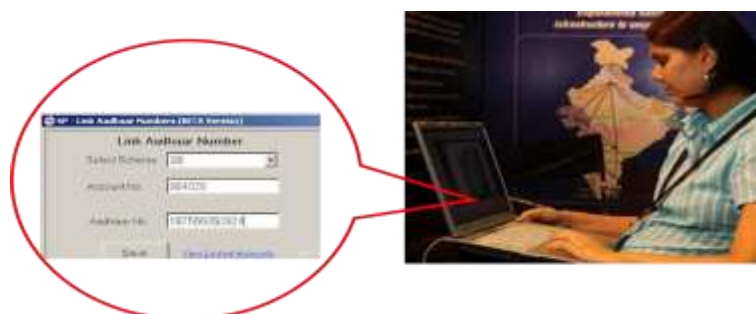


Figure 8: Seeding using Internet Banking

(iv) Mobile Banking

With more and more Bank Account holders adopting Mobile Banking, Aadhaar Seeding request can also be sent using the mobile handset, similar to the NUUP (National Unified USSD Platform) Services. Upon successful log-in, the Aadhaar Number Seeding Menu can simplify the task of sending the Seeding request to the Bank's backend.

Door-to-Door Campaign

The simplest way is to direct officials of respective scheme at various levels to run a Door-to-Door campaign to collect Aadhaar numbers for respective Scheme identifier.



Figure 9: An illustration of Door to Door Campaign

This method may be executed in two different manners:

- The concerned official (Gram Rozgar Sewak, ANMs, Teachers, etc.) records Aadhaar number manually on a sheet of paper. A suggestion while recording would be to make 3 blocks of 4 characters each like on Aadhaar letter to reduce recording errors. Subsequently, the data is digitized and updated in the service delivery database. Following is an example of a template of datasheet for MGNREGS. Same can be extracted from NREGASoft carried into the field to capture Aadhaar number.

A Sample MGREGS data entry sheet could like below:

| | | | | | | | | | |
|----------------|----------------|--|--|----------------|------------|--|--|--|-------------|
| State Name | Andhra Pradesh | | | State Code | 02 | | | | Page 1 of 4 |
| District Name | Anantpur | | | District Code | 0212 | | | | |
| Block Name | Agali | | | Block Code | 0212062 | | | | |
| Panchayat Name | Agali | | | Panchayat Code | 0212062007 | | | | |

| Sr. No. | Village Name | Village Code | Head of Household | Applicant No. | Name | Scheme Identifier | Gender | Age | Address | Aadhaar Number |
|---------|--------------|---------------|-------------------|---------------|---------------|------------------------|--------|-----|---------|----------------|
| 1 | Agali | 0212062007008 | Muddarangappa | 1 | Muddarangappa | AP-12-062-007-008/0023 | M | 45 | Agali | |
| 2 | Agali | 0212062007008 | Muddarangappa | 2 | Mallakka | AP-12-062-007-008/0024 | M | 34 | Agali | |
| 3 | Agali | 0212062007008 | Nagaraju | 1 | Nagaraju | AP-12-062-007-008/0025 | M | 36 | Agali | |
| 4 | Agali | 0212062007008 | Nagaraju | 2 | Marrjula | AP-12-062-007-008/0026 | F | 34 | Agali | |
| 5 | Agali | 0212062007008 | Prasad | 1 | Prasad | AP-12-062-007-008/0027 | M | 45 | Agali | |
| 6 | Agali | 0212062007008 | Prasad | 2 | Nagaratanamma | AP-12-062-007-008/0028 | F | 40 | Agali | |
| 7 | Agali | 0212062007008 | Ramesh | 1 | Ramesh | AP-12-062-007-008/0029 | M | 56 | Agali | |
| 8 | Agali | 0212062007008 | Ramesh | 2 | Gowramma | AP-12-062-007-008/0030 | F | 34 | Agali | |
| 9 | Agali | 0212062007008 | Ramesh | 3 | Laxmi | AP-12-062-007-008/0031 | F | 50 | Agali | |
| 10 | Agali | 0212062007008 | Erangappa | 1 | Erangappa | AP-12-062-007-008/0032 | M | 45 | Agali | |
| 11 | Agali | 0212062007008 | Daramdoppa | 1 | Daramdoppa | AP-12-062-007-008/0033 | M | 48 | Agali | |
| 12 | Agali | 0212062007008 | Daramdoppa | 2 | Anitha | AP-12-062-007-008/0034 | F | 24 | Agali | |
| 13 | Agali | 0212062007008 | Laxmipati | 1 | Laxmipati | AP-12-062-007-008/0035 | F | 30 | Agali | |
| 14 | Agali | 0212062007008 | Laxmipati | 2 | Thimmanna | AP-12-062-007-008/0036 | M | 35 | Agali | |
| 15 | Agali | 0212062007008 | Laxmipati | 3 | Rukminappa | AP-12-062-007-008/0037 | F | 34 | Agali | |
| 16 | Agali | 0212062007008 | Manjunatha | 1 | Manjunatha | AP-12-062-007-008/0038 | F | 56 | Agali | |
| 17 | Agali | 0212062007008 | Manjunatha | 2 | Rangamma | AP-12-062-007-008/0039 | F | 45 | Agali | |
| 18 | Agali | 0212062007008 | B. Narasappa | 1 | B. Narasappa | AP-12-062-007-008/0040 | M | 23 | Agali | |
| 19 | Agali | 0212062007008 | B. Narasappa | 2 | Babu | AP-12-062-007-008/0041 | M | 34 | Agali | |
| 20 | Agali | 0212062007008 | B. Narasappa | 3 | Seriappa | AP-12-062-007-008/0042 | M | 31 | Agali | |

Figure 10: Sample MGNREGS printout for Aadhaar Seeding

- b. The concerned official (ANMs, Teachers, etc.) is equipped with an application installed either on a tablet or a Smart phone. The application should provide the feature to record Aadhaar number for respective Scheme identifier and thereafter, the application through wireless connectivity synchronizes the data with Service Delivery database. An example of screen shot of the application developed by MGNREGS. Ministry of Rural Development is enclosed below:

Key Features of the MGNREGS Mobile Application:

- Runs on Android Ice Cream Sandwich (4.0) and above
- Synchronized with NREGASoft through web-services. Allows GRS to download wage seeker data of selected Panchayat and upload records with seeded Aadhaar numbers
- Provides additional feature to export records with seeded Aadhaar numbers to local database in CSV format (in case GPRS connectivity is not available)
- Allows GRS to scan QR code from Aadhaar letter, thereby minimizing data entry and related errors
- Includes Verhoeff algorithm to check validity of Aadhaar number

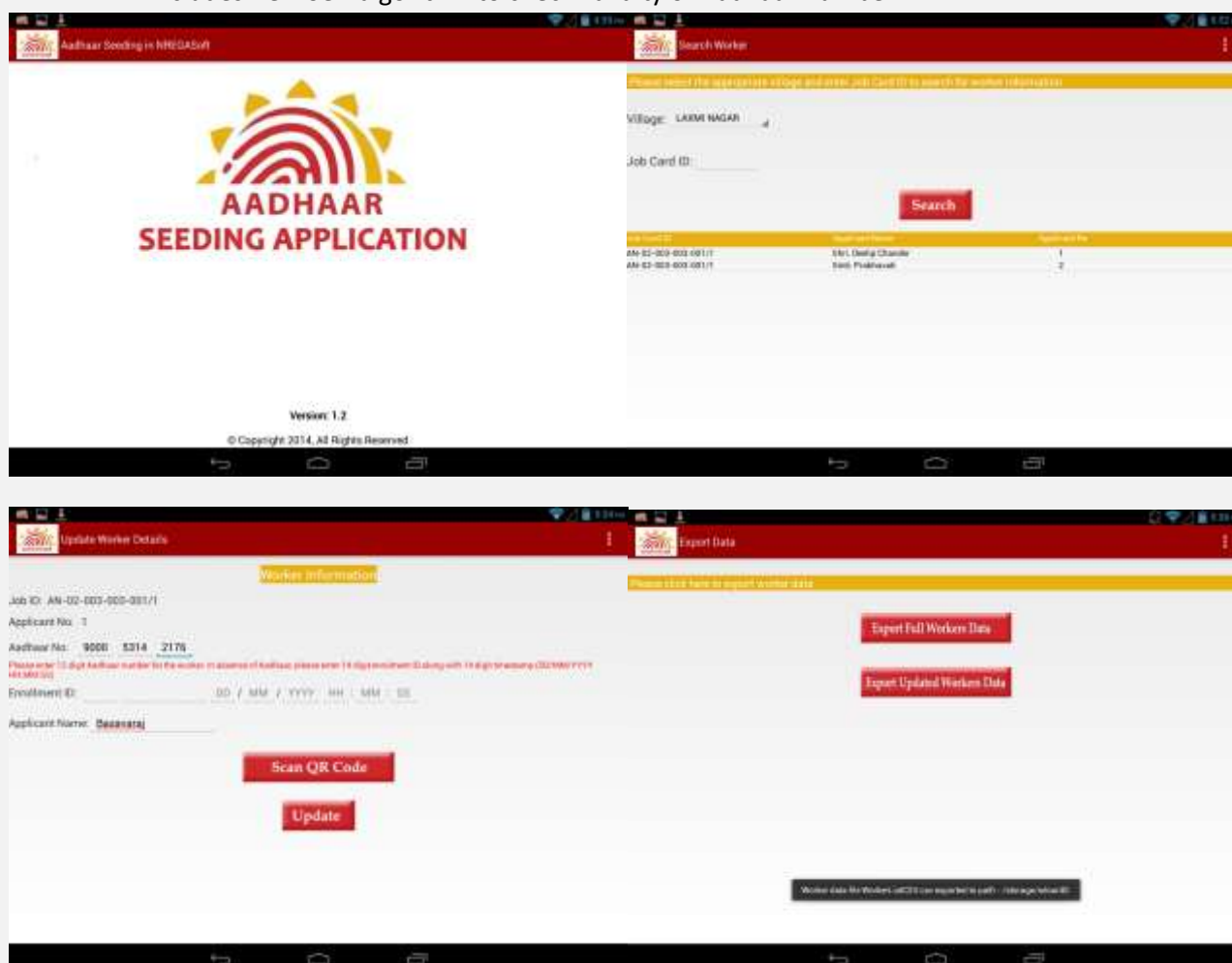


Figure 11: MGNREGS Mobile Application: Welcome Screen / Record Search Screen / Aadhaar Updation Screen / Data Sync with NREGASoft Screen

In both the above scenarios, the concerned official may either travel to village, or on prior notice invite residents at local Panchayat / community center.



Figure 12: Illustration of Special Camps / Aadhaar Haats

One such illustration of getting people to come to give Aadhaar number could be announcing **Aadhaar Divas** or Aadhaar collection drives at cultural festivals (**Haats**):

1. These events can be pre-planned and organized at large congregations centers like local stadiums, community halls with sufficient amount of notice to the local and nearby residents of the catchment area.
2. On the day of events, all the officials pertaining to the schemes should travel to such locations with all the lists and record all the Aadhaar linking details at such venues.
3. Beneficiaries can be further incentivized, by giving away snacks to every such beneficiary who brings in Aadhaar number with scheme identifier card copy and does a fresh linking of Aadhaar with scheme.
4. Can be jointly organized with the banks, to help banks to simultaneously complete the linking of Aadhaar with the bank accounts.

Aadhaar Seeding at Service Delivery Point

For some schemes, the beneficiary has to compulsorily visit a service delivery point to avail the benefit of service, like ration shop or MGNREGS work site. Hence, one of the simplest ways may be to record Aadhaar numbers along with the Scheme identifier at the point of service delivery.

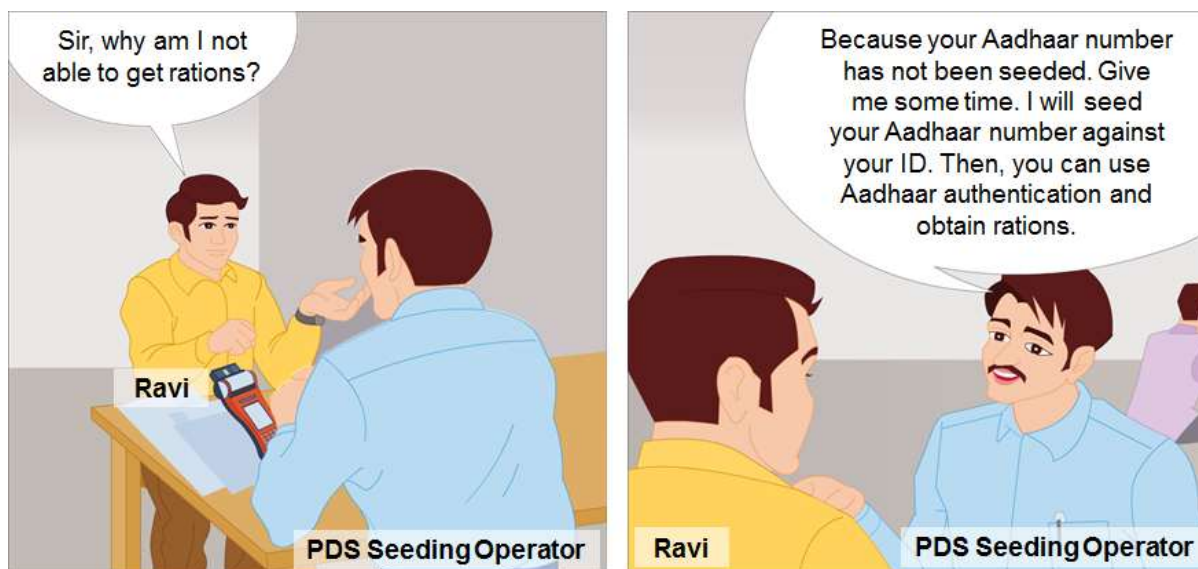


Figure 13: Aadhaar Seeding at Point of Service Delivery

Crowd Sourcing

Crowd sourcing is a process of obtaining needed services or content by soliciting contributions from large group of people. In regards to Aadhaar seeding exercise, this methodology may be adopted through various channels like:

- a. **Scheme-wise color coded drop boxes** at Panchayat level. The villagers shall be responsible for submitting a copy of Aadhaar letter and Identification document of the scheme. Thereafter, at each Panachayat an official may be made accountable for ensuring digitization of data and submission of data to concerned official in the block-

An Illustration of Drop Boxes can be:

1. 7 different color boxes for the 7 different schemes with matching color forms. These are placed at critical locations like Panchayat, Block office and District office; this will help people to put the right scheme form to the right drop box. The drop boxes depending upon location can be opened on pre-set frequency and time (very much like letter box).
2. Another possibility could be 7 small boxes can be placed in the vehicles of BDO and CDPO, so that on their field visits, people can just drop off their Aadhaar letters with copy of Scheme ID document into these boxes.
3. These colorful forms with the copy of Aadhaar letter and scheme ID document can also be posted to block office / District HQ / department by addressing it to the relevant BDO / District Collector / Section officer or director of scheme. Letters can be free of postage stamp and posted form anywhere in the country. Postal department shall deliver to addressee and collect the nominal charges of delivery of such forms.

- b. **IVRS, Call Centre, Internet, email and SMS** can be used for technology based solutions, where in a beneficiary voluntarily can call in, or write/send in information of Aadhaar and scheme identifier over multiple mediums. But such a tool may require additional field verification as the information may not be very reliable.



Figure 14: Self seeding through IVRS / SMS / Call Centre / Internet

Typically this exercise should be done before the field visits. So at the time of field visits, the representatives shall carry a printout with blank and filled in Aadhaar number. For verified records, they would just sign to confirm the Aadhaar number and for others they would just records it against the details of the record. A sample has been attached earlier.

- c. **Common Service Centers (CSCs)** may be appointed as the Seeding agency, where people can come and provide their Aadhaar number along with the Scheme identifier. CSCs may be equipped with an application hosted at a central level which can be further integrated with Scheme database. Additional operational details can be worked out at a later stage.

In either of the above scenarios, it is expected that scheme beneficiaries will either provide information at these points or representative of Scheme.

UIDAI's initiatives for enabling seeding

With the objective of providing impetus to the adoption of Aadhaar enabled service delivery, UID embarked on an initiative of creation of a framework which works as a catalyst for seeding. The framework recommends a set of methods and tools to service providers for use in their seeding initiative. Following are some of the initiatives taken for the same.

Aadhaar Verification Service (AVS)

In order to ensure correct Aadhaar Seeding, it is imperative that the Aadhaar is verified for its:

1. Genuineness, and
2. Existence, and
3. Correctness

As already discussed earlier, structural validity i.e. genuineness of an Aadhaar can be validated using the Verhoeff algorithm. In addition, to validate the Existence and Correctness of Aadhaar, UIDAI has launched the Aadhaar Verification Service (AVS) and is available at <https://resident.uidai.net/>.

The service is intended to benefit entities and individuals to verify a 12-digit number against Aadhaar database in an online, real time manner and provide a limited feedback. The key features of the service are:

1. It can be accessed by anyone who has access to internet
2. User is required to only enter Aadhaar number
3. The service will
 - a. Check structural validity of an Aadhaar number
 - b. Check if Aadhaar number is generated
 - c. If Aadhaar number is generated, then
 - i. What age group does this Aadhaar belong to?
 - ii. What is the gender associated with the Aadhaar?
 - iii. Current State associated with the Aadhaar?

User Interface Sample Screen Shot are shown below:



Figure 15: AVS Home Screen



Figure 16: AVS Response Screen

1. Illustrative Use Case for Aadhaar Verification Service (Entity)

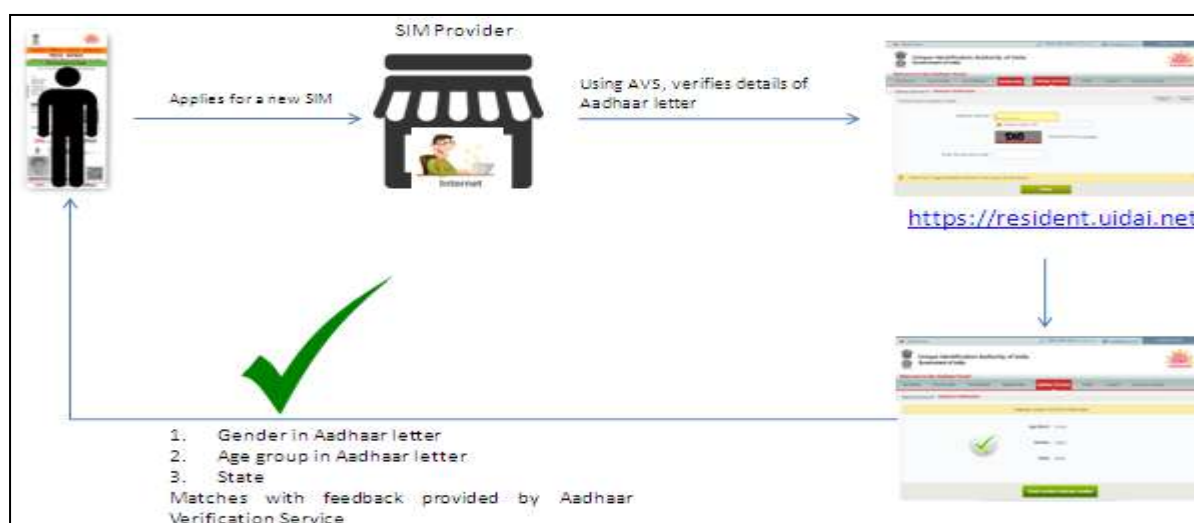


Figure 17: Use Case of AVS for Entity

2. Illustrative Use Case for Aadhaar Verification Service (Individual)

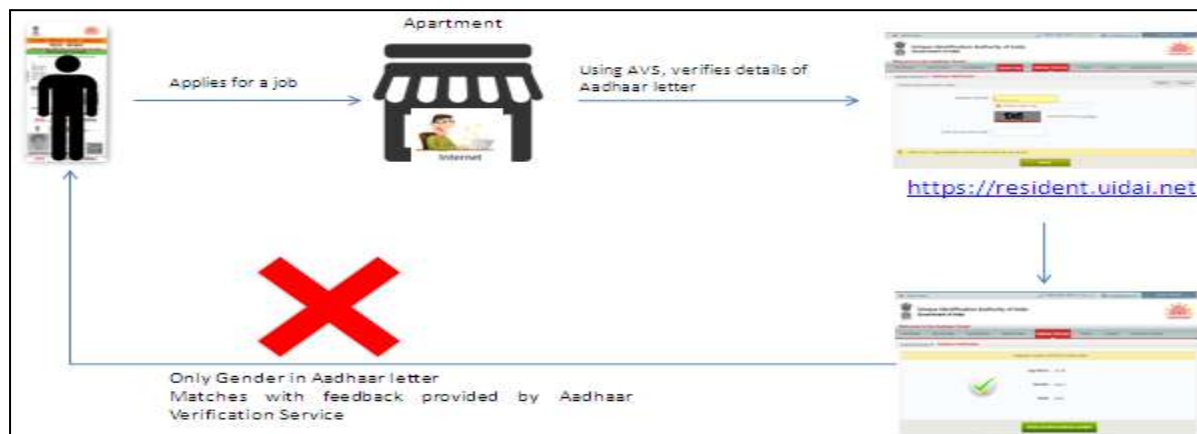


Figure 18: Use Case of AVS for Individual

Empanelment of seeding agencies

To further enhance the framework, UIDAI has decided to include a set of trained and certified seeding agencies. UID holders and service providers would be able to avail the services of these empanelled agencies through a limited tender.

In this context, the UIDAI plans to offer a scheme for empanelment of seeding agencies for carrying out the various functions and activities related to seeding. Following Request for Empanelment (RFE) document is intended to invite applications for empanelment from eligible entities. http://uidai.gov.in/images/tenders/rfe_empanelment_of_seeding_agencies_june_2014.pdf

The RFE is open to all competent organizations (including Private Companies, Public Limited Companies, Government Companies, PSUs, Semi-Government Organizations, NGOs and Not-for-Profit Organizations), which are registered and operating in India for last three years. The document describes the role, criteria, process of empanelment, and terms and conditions for empanelment.

Sub-Contracting of Seeding Work is not allowed for Private Companies, Public Limited Companies, PSUs, Semi-Government Organizations, NGOs and Not-for-Profit Organizations. However Government Organizations may franchise Seeding work to CSCs/ Local Government bodies.

Responsibilities of Verifier-



- ✓ Compare the beneficiary's Aadhaar data and service provider's data
- ✓ Decide whether both data belong to the same person
- ✓ Accept the seeding request if both the data match
- ✓ Reject the request if there is a mismatch

Figure 19: Responsibilities of a Verifier

Process of approval and Rejection of Seeding request



| Accept/Reject Seeding Request | | |
|--|---|--|
| UID No. : 863226320794 Name : Sunil Kumar Care Of : S/O Suresh Kumar Gender : Male DOB : 2002-01-01 Address : Hazaribagh, Jharkhand Pincode : 825313 |  | Beneficiary ID : UBIN0537438-2500100169510 Name : Sunil Kumar Care Of : S/O Suresh Kumar Gender : Male DOB : 2002-01-01 Address : Hazaribagh, Jharkhand Pincode : 825313 |
| <div> <input type="button" value="Accept"/> <input type="button" value="Reject"/> <input type="button" value="Keep Pending"/> </div> | | |

Figure 20: Approval / Rejection of Seeding Request

DSDV – DBT Seeding Data Viewer V2.0

UIDAI has proposed to embark on the “DBT Seeding Data Viewer” initiative to provide a comprehensive framework recommending a set of methods (using process flows and tools) for linking (seeding) Aadhaar numbers to existing beneficiary identities such as Bank Account numbers, Ration Card numbers, LPG consumer numbers, MGNREGS Job card numbers, Scholarship student IDs, etc.

The DSDV user manual is available at the following link <https://dbtsdv.uidai.gov.in/>. The key features of the tool are:

- It can only be accessed by user agencies who have signed appropriate MOU with UIDAI. (please contact UIDAI authentication team for applying for DSDV)
- Can only be accessed from a white listed IP Address
- Users of an agency have to authenticate using two factor auth – User name with password and OTP on a registered mobile.
- Users can view Aadhaar data based on Aadhaar number or EID number
- Administrator user can create other users
- UIDAI can activate/ de-activate access to any agency and /or all its users
- All access will be stores with audit trails.

Some of the screen shots of DSDV tools are shown below:

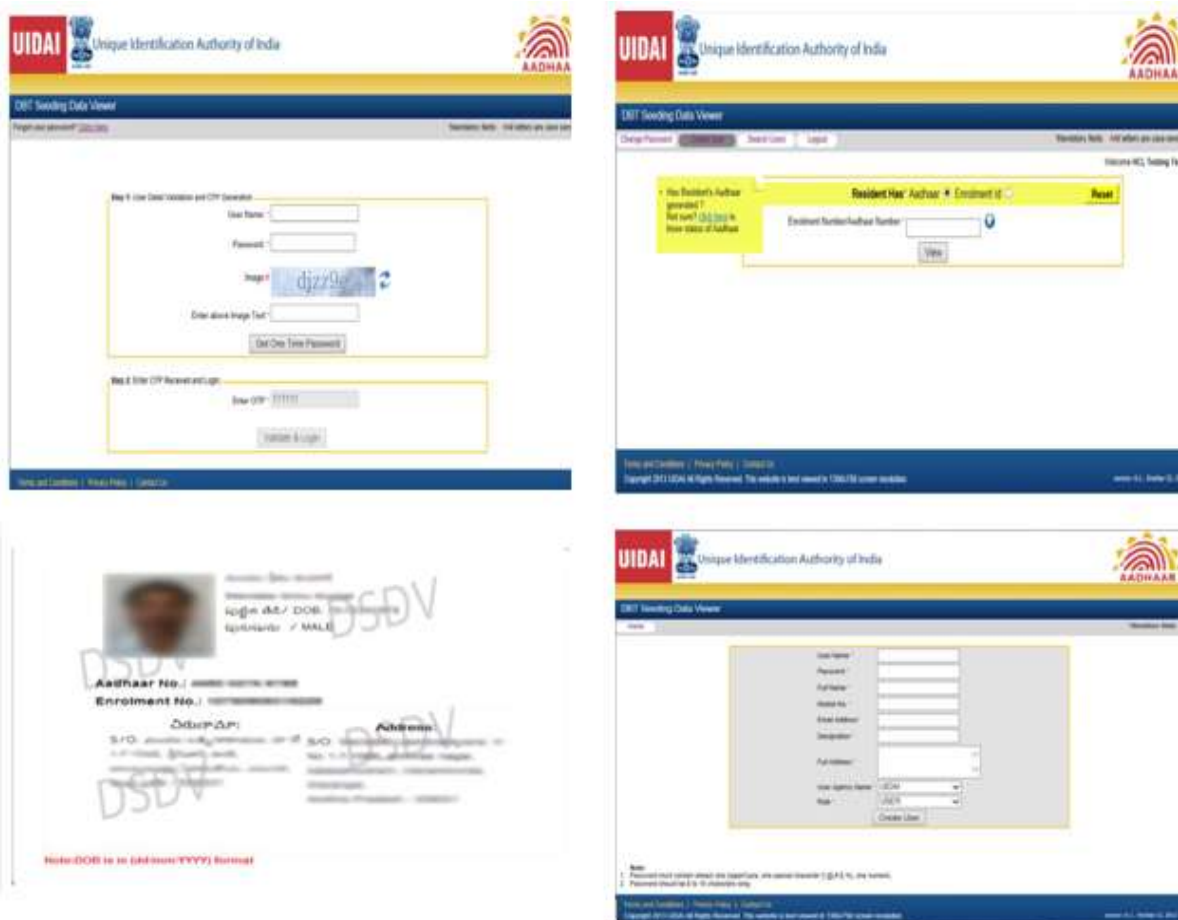


Figure 21: DSDV Screen - Login Screen / Home page with tabs / Aadhaar details / User Creation/ Comparing Data

DSDV – DBT Seeding Data Viewer V2.1 (Integrated View)

DSDV tool currently available to Government agencies has been further improved to provide an integrated view of two data sets (one from the beneficiary data-base and the other from Aadhaar data-base) in to a single view. The new version is intended to improve the productivity of seeding of data exponentially.

The key features of the tool are:

- It can only be accessed by user agencies who have signed appropriate MOU with UIDAI. (please contact UIDAI authentication team for applying for DSDV)
- Can only be accessed from a white-listed IP Address
- Users of an agency have to authenticate using two factor auth – User name with password and OTP on a registered mobile.
- Users can view Aadhaar data based on Aadhaar number, EID number, eMail and Mobile number registered with Aadhaar
- Administrator user can create other users
- UIDAI can activate/ de-activate access to any agency and /or all its users
- All access will be stored with audit trails
- Flexibility to Government agencies to build and design their application with a split screen, where one side of the screen can display agency data, while the other will display data fetched from Aadhaar server in an on-line, real-time manner

Sample User Interface:



The screenshot displays the 'Election Commission of India' (भारत निर्वाचन आयोग) website. The main navigation bar includes links for Home, Elections, Results, Election Laws & ECI Instructions, EIDEM, Gallery, Tender, RTI, FAQs, and Delimitation. The page is divided into two main sections: 'EPIC Details' and 'Aadhaar Details'. The 'EPIC Details' section contains input fields for Search, EPIC Number, Name, Address, Date of Birth, and Gender. The 'Aadhaar Details' section contains input fields for Aadhaar Number, Name, Address, Date of Birth, and Gender. Below these sections, there is a 'Quick Links for ECI Officials' section with links for Officer's Login, ECI Officers' Portal, Observer's Portal, CIO's portal, Election Management for ECI officials, Generals, International Cooperation, Link to DSDV Appstore, Miscellaneous Statics, Delimitation, Media Corner, Best Sharing Portal, National Voter Day, ECI Mail Service, Help, and Sitemap. The footer includes a disclaimer, copyright information, and a note about the website's best viewing resolution.

Figure 22: Sample Integrated View (DSDV Screen)



III. Avoidable Pitfalls while seeding

With above discussed solutions, a department or agency can choose one or more strategies to start seeding the database, but there are some common pitfalls that can be avoided, for example-

1. When seeding the responsibility of correct seeding is of the owner of the database.
2. There is always a possibility of wrong seeding. This is much more dangerous than NO SEEDING. To deal with this problem, following is recommended:
 - Demographic authentication is conducted on all seeded records
 - DSDV data verification facility is availed to verify Demographic fail cases.
 - For the records which failed, the name in beneficiary database can possibly be modified to be the same name as it appears on Aadhaar post field verification.
3. When using electronic tools like SMS collection, or using DSDV, the record looks similar and it is seeded. Based your department's experience, the threshold should be set for this seeding. For all other field verification should be carried out.
4. It is NOT OK to put family members / friend's Aadhaar number, if beneficiary does not have an Aadhaar number (unless allowed by scheme as policy). Such practices can lead to:
 - Demographic authentication failure
 - Wrong person gets funds, which eventually can translate into a claim
 - Bio-metric authentications will fail, as and when they may be needed
 - As the databases may start talking to each other, a person may just get disqualified as non-user Aadhaar is not eligible for benefits. E.g. BPL family giving Aadhaar of Non-BPL family / friend's Aadhaar

Illustration of WRONG Aadhaar is worse than NO Aadhaar:

Person 'A's Aadhaar number is seeded into person 'B's record in database (old age pension). Aadhaar number will pass all the validation checks. Even a bio-metric authentication (AEPS) will get processed when person A tries doing financial transactions from the account. At the time of government benefits transfer, the funds will get transferred to the account of B. The problem will appear when person issues a cheque or uses a debit card or updates his balance enquiry. His own was not getting credited but Person 'B's' account was getting credited. Hence, person B will access funds in account when s/he uses non-Aadhaar based transaction methods and Person A will feel he never got the funds which government record will show have been successfully credited to Person A's account.

IV. Keys Skills required of a Seeder

Importance of Planning a Door-to-Door campaign



Figure 23: Planning a Door-to-Door campaign

Communication tips for seeder-



- ✓ Be proficient in the local language
- ✓ Get trained in all areas you need to know how to do the job efficiently
- ✓ Have a very quick introduction as to who you are and why you are there
- ✓ Know how to deal with people who are reluctant to answer or are unfriendly
- ✓ Never lose your temper
- ✓ Have the same rules for everyone
- ✓ Develop rapport and make the residents feel comfortable

Figure 24: Some tips on communication

Some Don'ts of Communication



Figure 25: Don'ts of Communication

V. Pricing

UIDAI has estimated up to Rs 5/- per Aadhaar seeding, where the cost includes logistics, overheads, etc. Additionally, UIDAI under the Information, Communication and Technology (ICT) scheme is in a position to provide funds for Aadhaar Seeding in MGNREGS, NSAP and Scholarship schemes.

VI. Rewards and Recognitions program

It is recommended that individual Ministries / States / Districts / Blocks initiate a Reward and Recognition scheme. A humongous amount of effort will be spent by the local administration on Data digitization, Data Centralization and Aadhaar seeding. These efforts need to be recognized.

Illustration of criteria for rewards could be as follows:

1. Shortest time taken to completely clean the digital database by seeding Aadhaar numbers against the beneficiary list. The database is complete only when seeding is 100% compliant with pre-requisites as mentioned earlier, and all fakes / duplicates have been removed. The recognition can be looked at both block level and district level.
2. Highest number of beneficiaries and /or %age of beneficiaries seeded with Aadhaar either within a stipulated time and/ or in the shortest time.

Annexure – I

Detailed Aadhaar Seeding Activity

| Activity | Sub Activity | Description |
|---|--------------------------------------|--|
| Data Digitization, Data Centralization, and Aadhaar Enrolment | Data Digitization | Digitize data which either exists in silo databases, or in handwritten manner in registers. |
| | Data Centralization | Develop Centralized Scheme Application and deploy at either Ministry or State Level. E.g. MGNREGS has NREGASoft |
| | Build system validations for Aadhaar | <ul style="list-style-type: none"> Aadhaar number will always consist of 12 digits; Aadhaar number cannot start with 0 & 1; Aadhaar number structural validity should be checked by use of Verhoeff algorithm (URL:http://en.wikipedia.org/wiki/Verhoeff_algorithm) |
| | Aadhaar Enrolment | Conduct Aadhaar enrolment Camp, record EIDs UIDAI to share EID-UID file with the department on daily basis. Match EID and retrieve UID of the beneficiary |
| Aadhaar Seeding | Manual | Door-to-Door Collection of EID/Aadhaar & Scheme Identifier |
| | | Collect Aadhaar at point of Service delivery. E.g. Ration shops |
| | | Crowd Sourcing through IVRS, SMS and coloured Drop boxes |
| | | 3 rd party service providers |
| | | Common Service Centres (CSCs) |
| | | Organize Aadhaar Divas and Haats |
| | | Update beneficiary records with respective Aadhaar numbers |
| | Electronic | Run validation checks every time a record is being updated with Aadhaar number |
| | | <ul style="list-style-type: none"> Aadhaar number will always consist of 12 digits; Aadhaar number cannot start with 0 & 1; Aadhaar number structural validity by use of Verhoeff algorithm |
| | | Match Records using Name, Pincode, Gender, Age, etc with State Resident Data Hub (SRDH) |
| | | Use and Aadhaar Seeding App on smart phone / PoS device / tablet, etc. e.g. MGNREGS Mobile Application |
| | | Field Verification of all probable matches |
| | | Update beneficiary record in database with VERIFIED Aadhaar no. |
| | | Collect EID records from the database if captured in database |
| | | UIDAI to share EID-UID file to get corresponding UID number |
| | | Run validation checks every time a record is being updated with Aadhaar number |
| | | <ul style="list-style-type: none"> Aadhaar number will always consist of 12 digits; Aadhaar number cannot start with 0 & 1; Aadhaar number structural validity by use of Verhoeff algorithm |
| | Database Cleaning | Run Validation checks |
| | | <ul style="list-style-type: none"> Aadhaar number will always consist of 12 digits; Aadhaar number cannot start with 0 & 1; |



| | | |
|--------------------------|--------------------------------|--|
| De-Duplication | | <ul style="list-style-type: none"> Aadhaar number structural validity by use of Verhoeff algorithm |
| | | Run Aadhaar De-Duplication check within the centralized database |
| | | Generate List of duplicate Aadhaar numbers |
| | | Undertake field verification of records meeting above conditions |
| Aadhaar Authentication | Establish Aadhaar authenticity | Send Records for Demographic Authentication to UIDAI |
| | | Field Verification of rejected records |
| | | Eliminate or Correct rejected records after field verification |
| Direct Benefits Transfer | Actions at banks | Ask beneficiaries to submit their Aadhaar number to banks |
| | | Banks to seed Aadhaar number in CBS against a/c number |
| | | If there is no exiting account, open a new Aadhaar linked SB a/c |
| | | Run validation checks every time a SB a/c is being updated with Aadhaar number |
| | | <ul style="list-style-type: none"> Aadhaar number will always consist of 12 digits; Aadhaar number cannot start with 0 & 1; Aadhaar number structural validity by use of Verhoeff algorithm |
| | | Banks to update NPCI Mapper Database |
| | Department or Ministry level | Sponsor Banks to modify system to read and accept Aadhaar based Payment Advice |
| | | All payment advice to be generated through centralized system using Aadhaar number as Financial Address |
| | | System should have provision to generate Non-Aadhaar based Payment Advice, in case beneficiary does not have Aadhaar number |
| | | Banks to accept and credit the payments directly into beneficiary account |
| | | All payment advice to be generated through centralized system using Aadhaar number as Financial Address |
| | | |
| Last Mile Accessibility | Empowering Beneficiaries | Banks to deploy Inter-operable Business Correspondents |

Annexure – II

Synopsis of Seeding Strategies

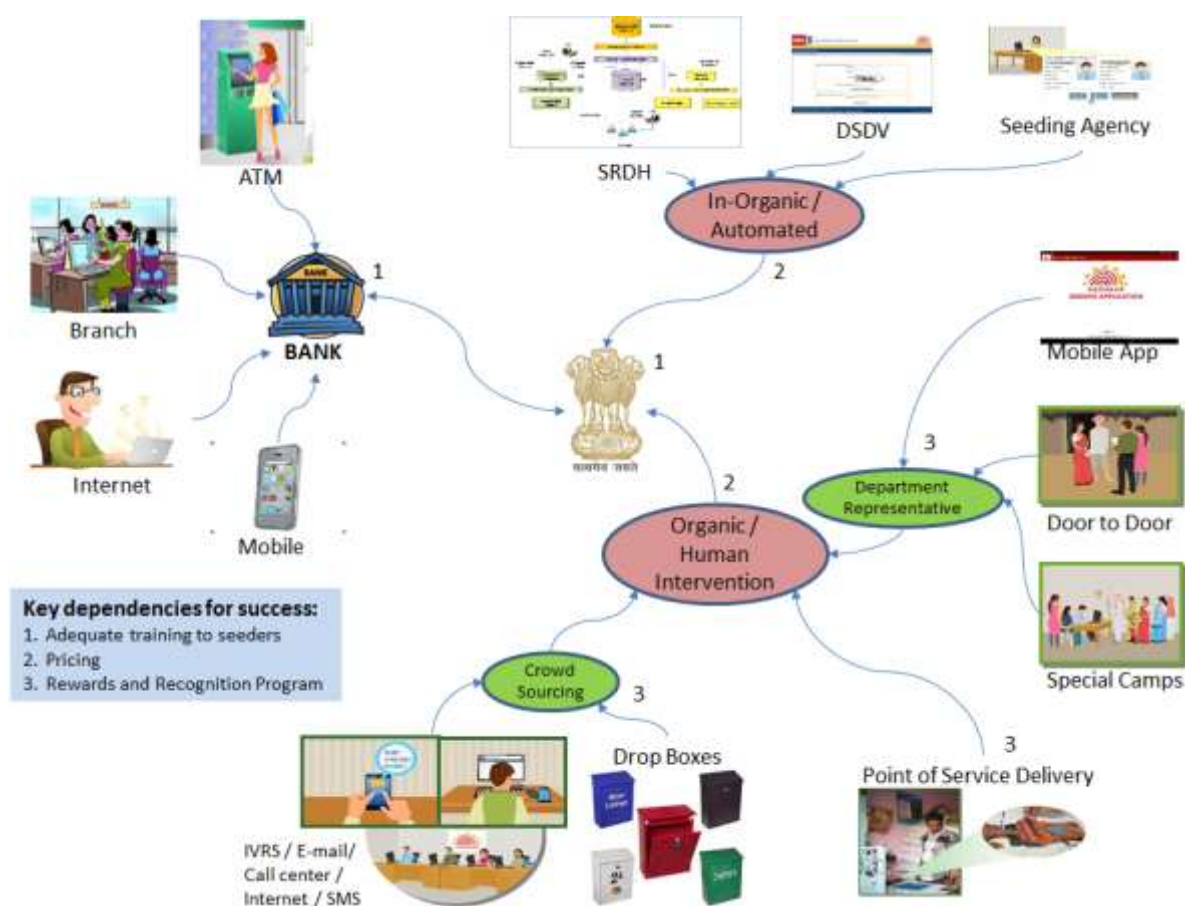


Figure 26: Synopsis of Seeding Strategies