



# FEASIBILITY OF DIGITIZING OF PAYMENT FOR DRE PRODUCTS

CASE STUDY

# 1.1

## Context

*Shakti Sustainable Energy Foundation (SSEF) is a not-for-profit organisation committed to support India's developmental and energy security objectives. SSEF commissioned Intellecap Advisory Services to enhance access to finance for decentralised renewable energy (DRE) enterprises by providing requisite advisory support to such enterprises. As a part of the program, Intellecap is supporting DRE enterprises in designing solutions for existing business-related issues that impact scale and sustainability as well as in implementing strategies for expansion and growth so as to guide them towards investment readiness. This document draws the key learnings of working with one of the DRE enterprises and captures the context, key challenges faced, solutions recommended and the expected outcomes over the near to medium term.*

### About the company

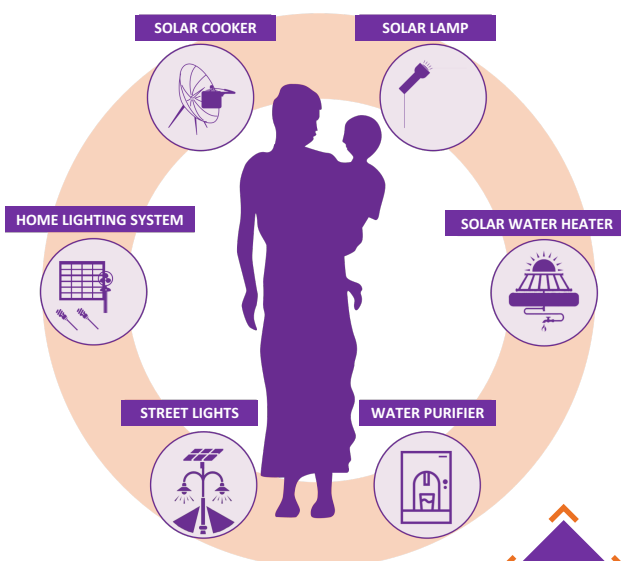
Grameen India is an early-stage, self-funded energy-access enterprise headquartered in Jaipur, Rajasthan. The company, which started operations in 2011, focuses on providing solutions for energy access to rural areas that are either not connected to the grid or have intermittent power supply. In partnership with product manufacturers, the company markets innovative and specially designed appliances as well as consumer durables in rural India. Its product portfolio comprises a wide range of solar energy-based products such as home lighting systems, water heaters, streetlights, lamps, DC Fans and solar cookers.

The enterprise's products are currently very popular in rural Rajasthan. The company takes these products to the last mile through more than 300 dealers spread across the state.

### Background

There is a huge gap in energy demand and supply in Rajasthan. The absence of large rivers has restricted the development of hydropower projects in the state. Further, high cost of transportation of coal from other states has pushed up cost of energy. As such, the unmet demand can be potentially met through alternative and renewable energy products. Rajasthan is India's largest state by area (10.4% geographical area of the country). Thus, the potential market for alternate and renewable energy solutions is a sizeable one. It is estimated that even though the village electrification ratio in Rajasthan is an impressive 99.3 percent, approximately 24.65 lakhs rural households i.e., around 30 percent of the total rural households in the state, lack access to electricity and rely mostly on subsidized kerosene as their primary source of lighting.

Figure 1: Grameen India's popular products



Source: Intellecap analysis

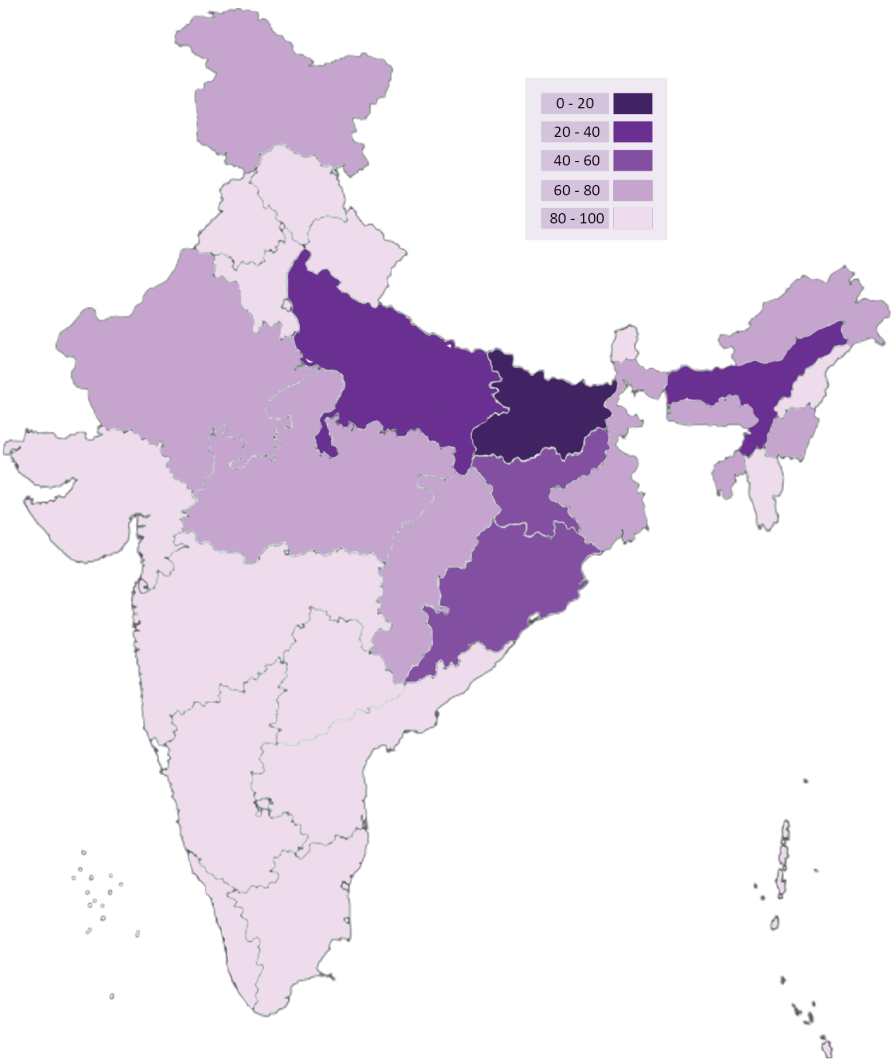
A majority of the population gets only 7-9 hours of electricity supply in a day, with supply during the evening limited to only 0.5-2 hours.

Technology innovations in the renewable energy sector have fuelled hopes of enhancing access to energy in rural areas. Solutions that do not depend on connections to the grid, like distributed and decentralised generation of electricity and stand alone products such as home lighting systems and solar cookers, can resolve most of the energy-related problems in rural areas. However, rural DRE enterprises face traditional challenges of ensuring affordability of their solutions as well as collecting regular payments from consumers. While enterprises benchmark prices to current traditional

sources of lighting and offer a variety of payment schedules to ensure villagers are able to afford their service, collection of payments is a time-consuming and labour-intensive process. High payment default rates can have a significant impact on operating cash flows as well as profitability, which further underlies the importance of an efficient payment collection process.

*This study was, thus, aimed at identifying issues with the current payment system involving dealer-based product delivery and payment model. It provided information on various systems that could be used to improve efficiency and also analysed the feasibility of deploying alternate cost-effective digital payment solutions.*

Figure 2: Percentage of households electrified in each state



## 1.2

# Key Challenges

### Dealer-based models are cash intensive and increase working capital requirement of enterprises

Since DRE enterprises deal mostly with rural customers, they have accordingly tailored their mode of functioning to suit the rural context. For instance, a number of enterprises operate through dealers, primarily retail stores, provide goods/ equipment on credit (with a 15-day cycle), and collect payments from these dealers in cash. In the process, these enterprises incur several incidental costs such as payment to staff for cash collection and bank transaction charges on cash deposits.

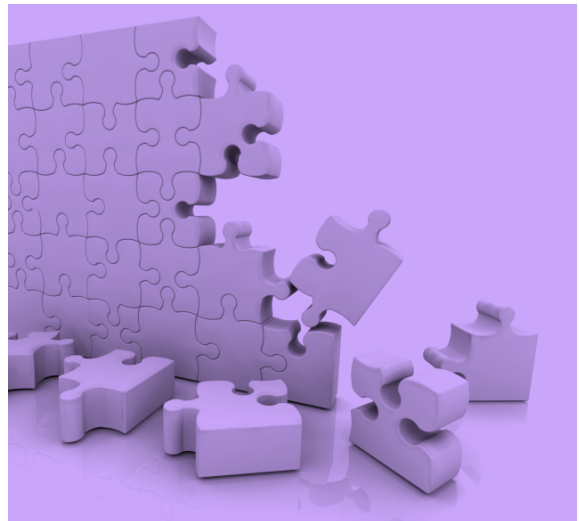
The manual payment collection system also allows retailers to have a longer credit period. This is because the payment collector is responsible for a pre-defined territory. Accordingly, he creates a defined route plan for payment collection, and can, therefore, come back to a particular dealer only after a certain period of time. Dealers try to take advantage of this by defaulting on collection date, knowing that the collector cannot come back for collection soon. This increases the credit period and in turn affects the company's requirement of working capital. The end result is a negative impact on business performance and profitability. Thus, an efficient payment collection system is a key requirement for enterprises in the sector.

### Lack of knowledge and trust on digital services deters usage of alternative payment system by rural dealers

Majority of the dealers in rural areas prefer cash

transactions even though most of them hold bank accounts with a debit/ ATM card. Dealers, usually short-staffed, lose customers when they close their shops for a visit to the bank. In fact, bank visits are considered so much of an imposition on time that very few dealers (only 20-30%) deposit their sales proceeds into bank accounts. Discussion with dealers also revealed that they need training on use of net banking on smartphones. In addition, the dealers are not willing to accept debit cards payments even if POS machines are made available, since they do not trust the digital payment systems.

Although dealers agree on the benefits of banking/digital finance, they want to keep digital transactions to a minimum and prefer to deal in cash because it means zero settlement time, no additional charges, and limited tax concerns or inconvenience.



## 1.3

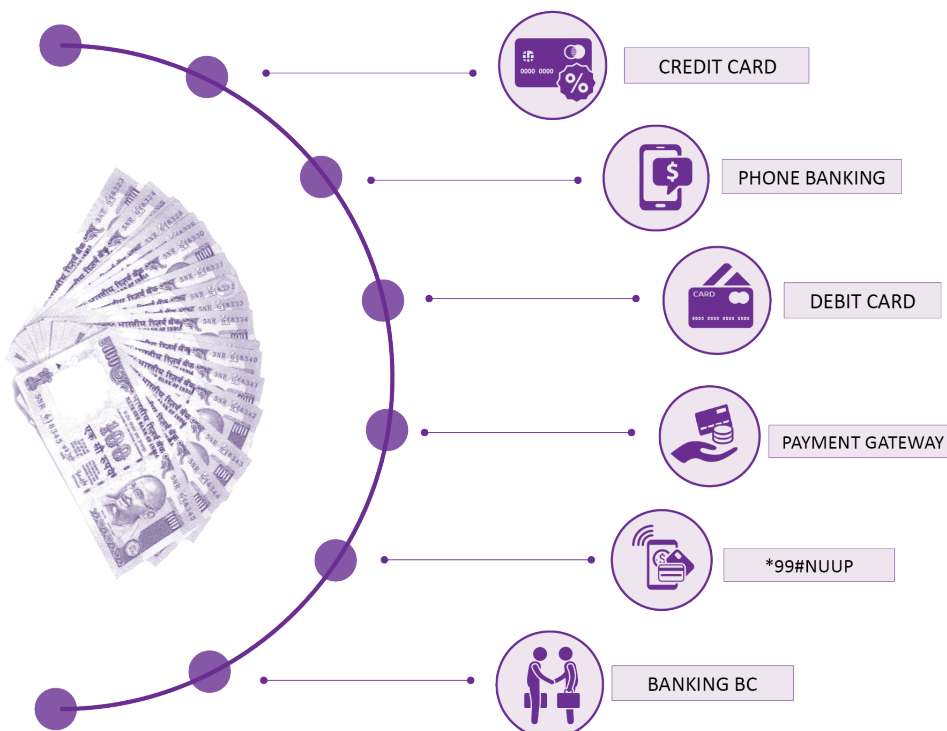
# Solution Themes

Several parameters such as setup cost, transaction charges, user ability, user readiness, and overall feasibility were taken into account to assess six different payment options such as debit cards, credit cards, Kisan Credit Card, overdraft (OD) facility, Net Banking (NEFT/IMPS), and Mobile Wallets/Gateways.

Based on comparative analysis of the six available digital payment modes, Banking Business Correspondents (BCs) and \*99# NUUP (National Unified USSD Platform) were identified as options that could meet the varying

demands of enterprises as well as dealers in this space. Business Correspondent channel allows dealers to pay enterprises using their preferred model of payment – cash. On the other hand, the \*99# NUUP initiative allows mobile banking transactions using basic mobile phone without mobile internet data through the Unstructured Supplementary Service Data (USSD) channel. This facility is aimed specifically at including the non-banking population into mainstream banking services.

Figure 3: Payment options evaluated

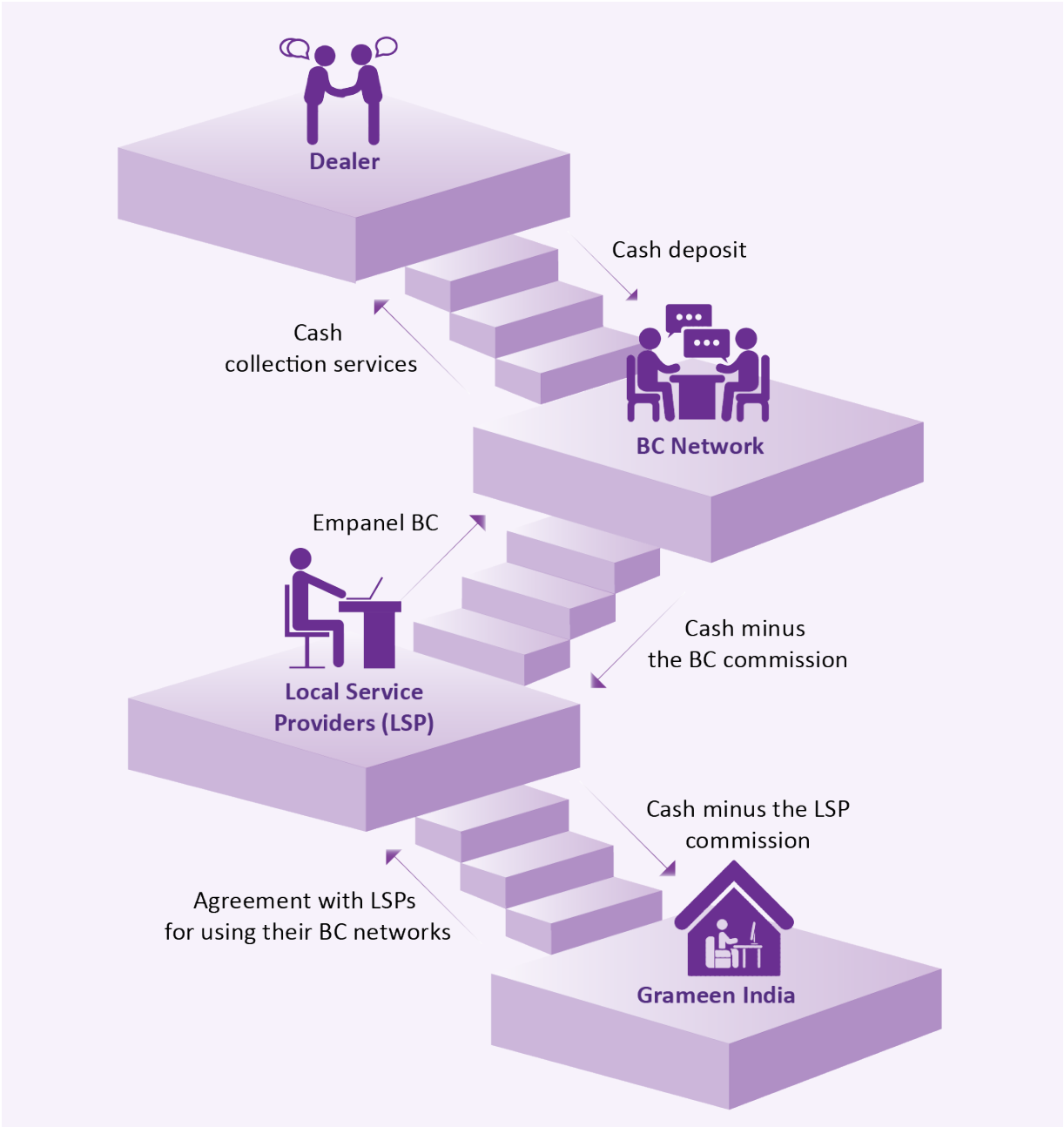


**Business correspondent model**

Payment collection through Bank Business Correspondents (BCs) empanelled with a bank, would work very well in rural areas as this method is just an extension of the existing payment in cash method but is more efficient. The BC agent and the dealer agree upon the collection date and the amount to be collected on that date as they can visit the customer multiple times in

case of default on the pre-defined date due to their vicinity from their area of operation. The transaction fee charged by the BC agent depends on the number of transactions that take place over a month. While the fees are high when compared to other modes of payment, the BC mode allows dealers to continue to deal in cash (their preferred mode) while reducing the collection cycles for the enterprise.

Figure 4: Payment collection through BCs

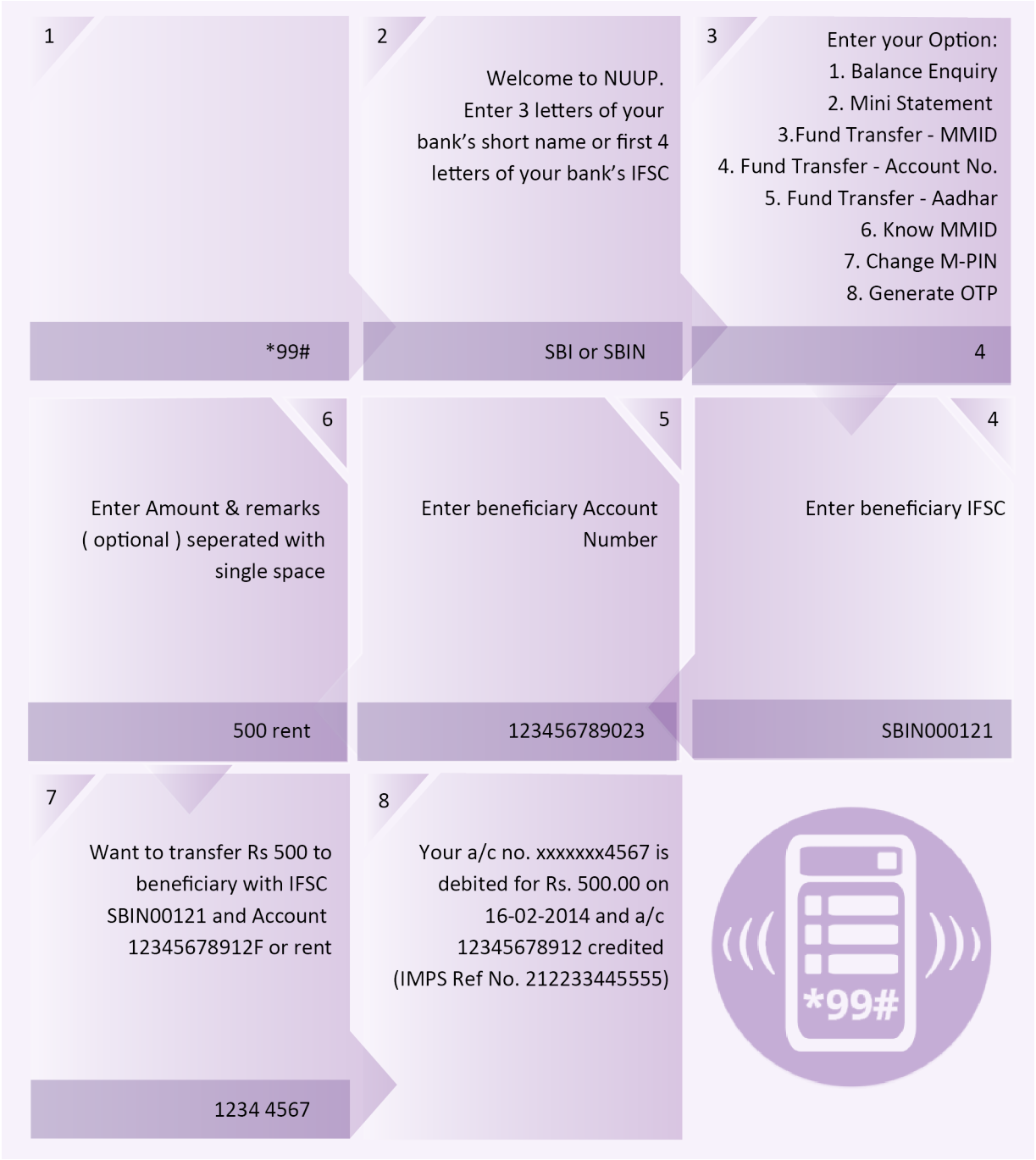


**\*99# NUUP service**

Payment collection through the \*99# NUUP initiative needs a basic phone and an authorised bank account. If the enterprise enters into partnership with dealers who have a bank account (majority of the dealers do) and prefer to use it, the enterprise only needs to provide additional training on the use of \*99# NUUP platform.

Once adopted, the technology will eliminate the need for the dealer to go to the bank branch for making the payments. Payment collection through the \*99# NUUP initiative is thus effective and easy to use but would require willingness on the part of dealers to use authorized bank accounts and move away from cash-based transactions.

Figure 5: Payment collection through \*99#





There are two kinds of costs involved with using the \*99# NUUP service – money transfer charges applicable for availing IMPS services and telecom service provider charges. These charges are, however, very nominal. Further, transactions can be made easier using options such as MMID, Aadhar, and mobile number of beneficiary. This would eliminate the need to enter IFSC code and account number which would otherwise make it a lengthier process.

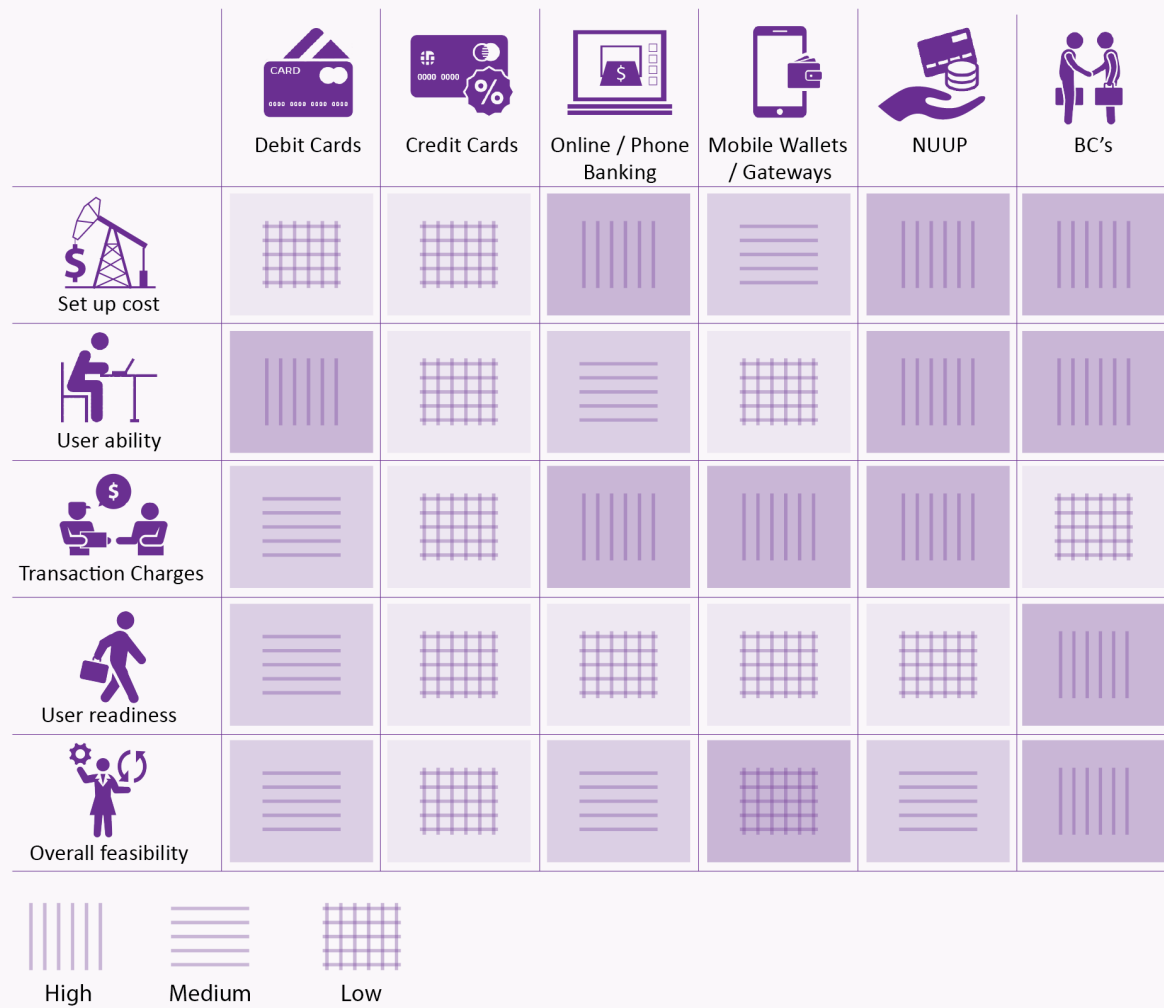
**The business correspondent model is more favourable compared to \*99# NUUP service where dealers have preference for cash transaction**

While there is a cost involved in both methods, the cost of using a BC is significantly more—almost fifteen times higher than the cost of using the NUUP service. Hence,

when BC services are used, the cost will have to be offset by a minimum of 2-3% mark-up on the price of the product. However, given present conditions and dealers’ preference for cash, pilot of BC services was recommended. Several Local Service Providers (LSPs) such as Aksh Vakrangee and CMS were recommended as such to ensure wide coverage of BC network in the region.

On the basis of success of the pilot, enterprises can also plan to use the government supported eMitra portal which can further help them in economizing the cost of their collection process. However, given the fact that government registration is a time-consuming process, private local service providers would be ideal for pilot of services.

Figure 4: Comparative analysis of various payment options available



Source: Intellecap Analysis

1. Status of Rural Electrification in Rajasthan; [http://www.ddugjiy.gov.in/mis/portal/state\\_wise\\_summary1.jsp?stateCode=08](http://www.ddugjiy.gov.in/mis/portal/state_wise_summary1.jsp?stateCode=08)  
 2. Final Report on Evaluation of RGGVY in Rajasthan, Assam, Gujarat, Himachal Pradesh and Uttar Pradesh, IRADe; [http://www.ddugjiy.gov.in/mis/portal/evaluation/IRADe\\_Combined\\_Executive\\_Summary.pdf](http://www.ddugjiy.gov.in/mis/portal/evaluation/IRADe_Combined_Executive_Summary.pdf)



## 1.4

# Way Forward

Grameen India was suggested to enlist BC services for dealers who continue to prefer cash. However, given the high costs involved in dealing with the local service providers and BCs, a mutually beneficial agreement is under process for cost sharing.

Dealers who are ready to transact using banking services can be gradually moved to NUUP as it is more convenient and efficient. However, the enterprise wants to ensure that the cost of products to the dealers who use \*99# NUUP does not change and, thus, incentives such as trade discounts could be provided for the dealers who

prefer using \*99# NUUP service.

The enterprise is trying to develop training models for this initiative. It will subsequently conduct training sessions to help dealers in using cashless payment options such as \*99# NUUP service. Live demonstration of cashless payments during such trainings would help in developing trust towards usage of these payment options with which dealers are currently not very comfortable.