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Discrete Choice Experiment for Data Use Incentives in Malawi

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The Kuunika Project: Data for Action is a 4-year programme funded by the Bill & Melinda Gates Foundation (BMGF), implemented through the Government of Malawi (GOM) and partners. The goal is to establish a strong base of high-quality, routinely-available data and ingrain culture of data use among health sector technicians and policy makers.



Overview of Methods

We hypothesize that decision makers in Malawi prefer some incentives over others, and consequently, implementation of the most valued incentives will lead to the greatest increases in routine data access and data use.

Defining Data Use & Incentives

DATA USE - is defined as the practice of collecting, managing, analyzing, and interpreting data for making program policy, management, or healthcare delivery decisions.

INCENTIVES - are defined as financial or non-financial reward that motivates individuals to behave in a particular manner.

Discrete Choice Experiment methods allow researchers to quantitatively measure perceived value and trade-offs between options provided to participants in simple survey form. Additionally, DCE methods can determine the probability of take-up among the various options provided. This allows policy makers to choose those factors that will most affect the desired outcome.

Typical Use Case

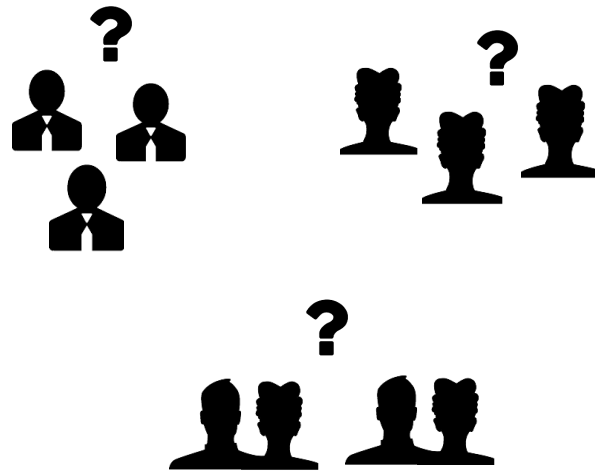
A local Government wants to improve transportation

- ▶ They can invest in better roads, trains, or buses



What should they Pick?

- ▶ *It depends on what people prefer, because people must use them to be sustained*



Using a DCE the government can say 3 important things

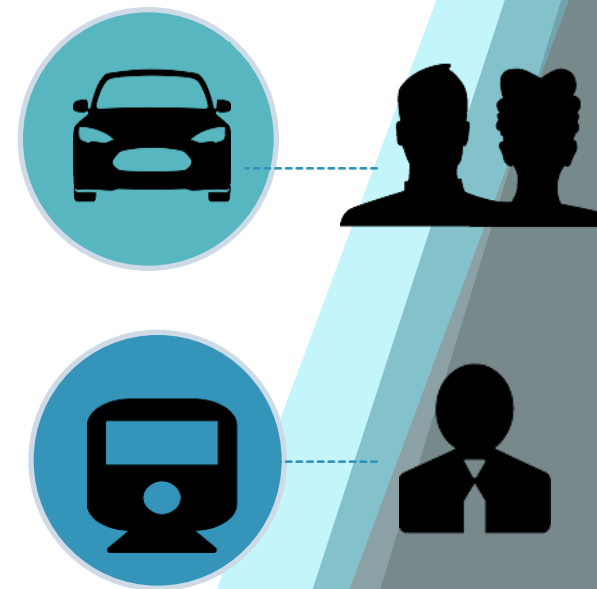
1. Which options are likely to be the most successful



2. How strongly each option is preferred



3. Who prefers each option more.



Example used in Malawi

Example: Employment at Rural Facilities in Malawi

Choice Set: A

Job 1		Job 2	
Location:	City	Location:	District town
Net monthly pay:	K40,000	Net monthly pay:	K50,000
Availability of material resources (equipment, drugs and other supplies)	Usually inadequate	Availability of material resources (equipment, drugs and other supplies)	Usually adequate
Typical workload:	Heavy: Barely enough time to complete duties	Typical workload:	Medium: Enough time to complete duties
Provision of government housing:	Basic housing provided	Provision of government housing:	No housing provided
Opportunity to upgrade qualifications:	After 5 years	Opportunity to upgrade qualifications:	After 3 years

Question 1:
In your opinion, of the two jobs described which one do you think is the best job?
☐ Job 1 ☐ Job 2

Question 2:
Taking into account your circumstances, would you choose to take
☐ Job 1 ☐ Job 2 ☐ Neither Job

- ▶ Nurses were asked to pick preferred jobs at different locations
- ▶ Standardized tool used across many countries to determine preferences and create policies for attracting clinicians to rural facilities
- ▶ Mangham and Hanson, 2008



Malawi DCE for Data Incentives

Attribute	Level
Leisure Time	10 hours/week
	5 hours/week
	15 hours/week
Training	Independent Learning
	Blended Learning
	Group Learning
Feedback & Support	Virtual Peer Group
	In-Person Peer Group
	One-on-One
Technology	Mobile Phone Application
	Facility Computer
Recognition	Present to Supervisor
	Present at National Conference
	Certificate in Data Management

Training Attribute Level Example

Independent Learning

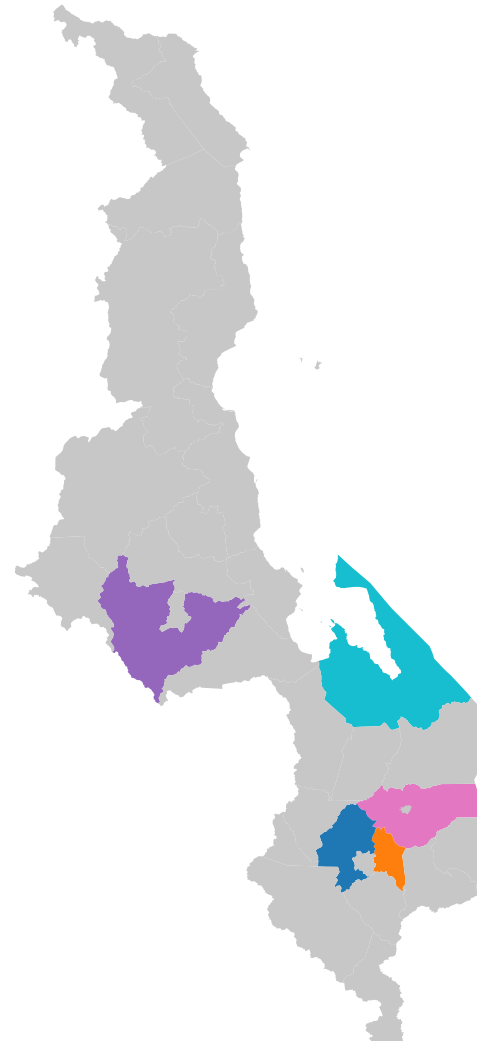
- ▶ *You are asked to spend your leisure time (X hrs) engaged in an Independent, self-paced learning course on data management and data use. Paper materials will be provided to you. You may work through the materials at your own pace from any location, but not during your normal duty hours. You will be required to complete proficiency exams periodically. These exams are monitored and you must pass each exam before moving on to the next module.*



District Selection

5 Districts in Malawi were chosen based on the following criteria and operational factors:

- HIV burden
- The ability to capture data from both high and low performing sites
- The ability to capture data from sites with different patient volumes, human resource footprints, and electronic system capabilities
- Historical support for data systems and/or reporting
- Regional distinctiveness
- Study budget



Example survey choice set

Choice Set #1

	Package 1	Package 2
Training	<i>Independent Learning</i>	<i>Blended Learning</i>
Feedback & Support	<i>One-on-One</i>	<i>Virtual Peer Group</i>
Technology	<i>Facility Computer</i>	<i>Mobile Phone Application</i>
Recognition	<i>Certificate in Data Management</i>	<i>Present at National Conference</i>
Leisure Time	<i>5 hours/week</i>	<i>10 hours / week</i>

Which do you prefer?

Package 1	Package 2	Current Situation
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1

Choice Set #2

	Package 1	Package 2
Training	<i>Group Learning</i>	<i>Independent Learning</i>
Feedback & Support	<i>Peer Group</i>	<i>Virtual Group</i>
Technology	<i>Mobile Phone Application</i>	<i>Facility Computer</i>
Recognition	<i>Present to Supervisor</i>	<i>Present National Conference</i>
Leisure Time	<i>15 hours/week</i>	<i>5 hours / week</i>

Which do you prefer?

Package 1	Package 2	Current Situation
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2

Data Collected



5 Districts
Facilities



20
Facilities



328
Individuals



14
Choice
Sets

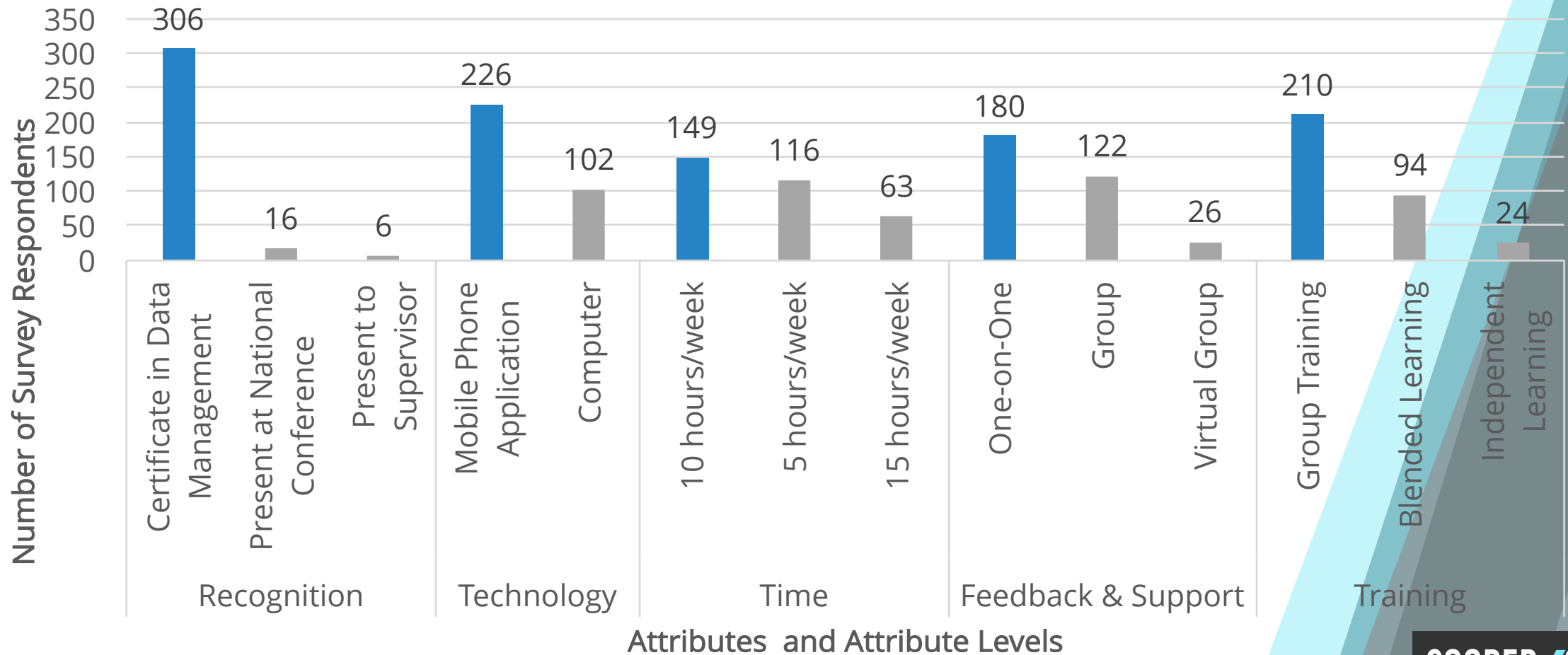


4,592
Observations



What does the ideal incentive Package look like?

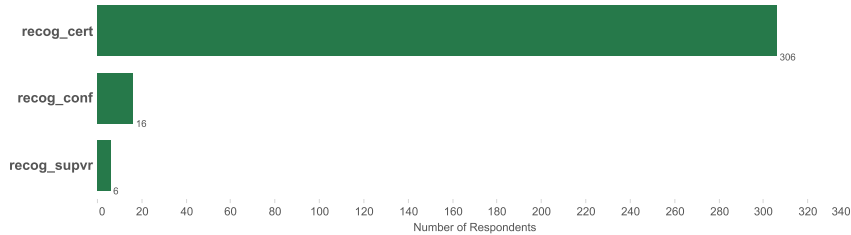
Number of survey respondents that ranked each attribute level as their most preferred (n=328)



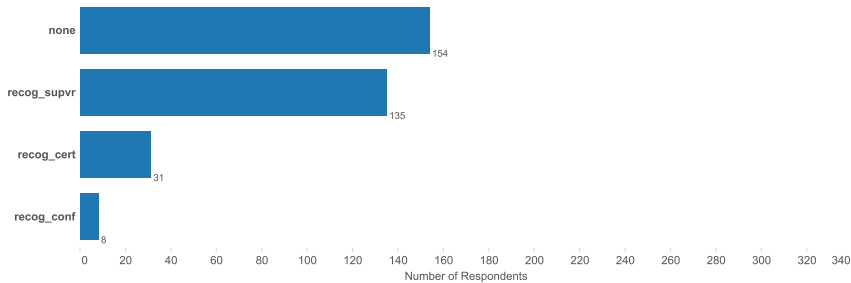
This doesn't typically look like their current situation.

Recognition
(n=328)

Which of these scenarios do you prefer?



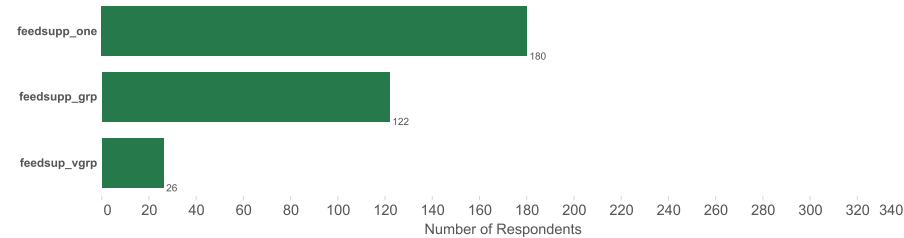
Which of these scenarios is most like your current situation?



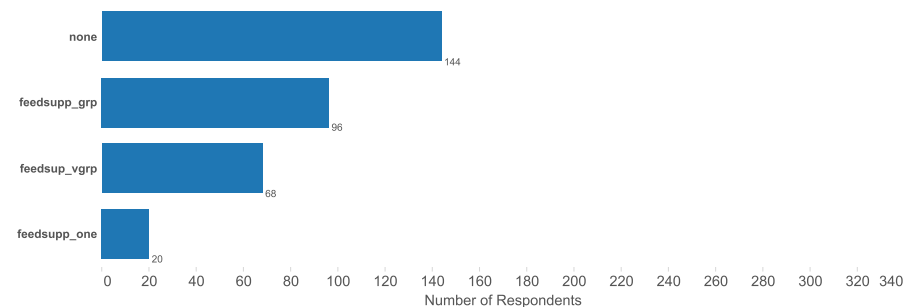
For Recognition, respondents overwhelmingly preferred a **CERTIFICATE IN DATA MANAGEMENT**, whereas their current situation was either **NONE** of these or **RECOGNITION FROM THEIR SUPERVISOR**.

Feedback & Support
(n=328)

Which of these Feedback & Support scenarios do you prefer?



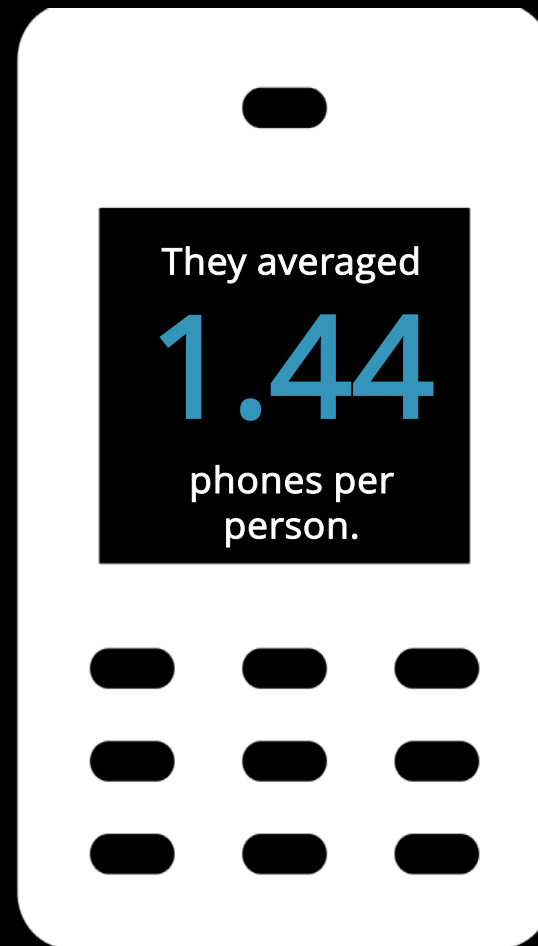
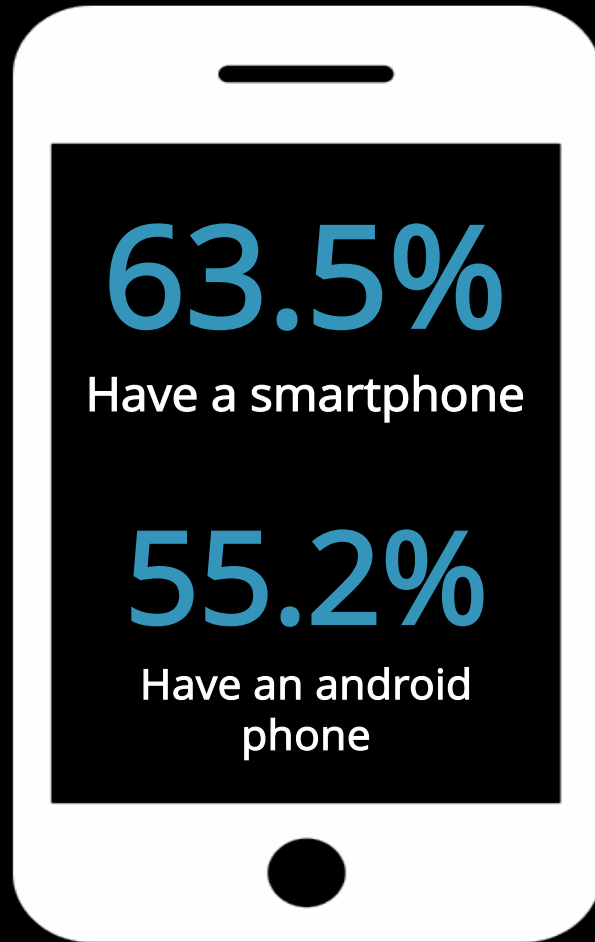
Which of these scenarios is most like your current situation?



For Feedback & Support, respondents preferred a **ONE-ON-ONE FEEDBACK**, whereas their current situation was either **NONE** of these or **GROUP FEEDBACK**.



They shattered myths that smart phones are unavailable.



81%

Bought the phone themselves.

TOP 5 PHONE BRANDS:

1. Samsung
2. ITEL
3. Nokia
4. Huawei
5. Techno



What do different health worker cadres prefer?

When asked which scenario they think is the best per attribute:

DISTRICT STAFF:

- Chose both the Individual training and Group Training (49%, n=25)
- Chose 5 hours/week rather than the 10 hours/week (47%, n = 27)

NURSES:

- Chose 5 hours/week rather than 10 hours/week (48%, n = 32)
- Chose the certificate in data management at the highest rate (96%, n = 62)

STATISTICAL CLERKS/HMIS OFFICERS:

- Wanted computers more than other cadres. (44%, n = 16)

HSA/HDA:

- Chose 15 hours/week over 5 hours/week (n=23, n = 18)
- No one choose recognition from a supervisor (n=86)

What do health workers have to say:

What kind of training is ideal?

*"I would like to be trained in **EXCEL** but I don't need a **CERTIFICATE** after the training I just want to have the knowledge and use it."*

What kind of recognition is ideal?

*"To be given an **INCENTIVE** like a device and airtime in order to be able to **ACCESS DATA**."*

What kind of recognition is ideal?

*"To be **CONSISTENT** always and continue with awards like for best nurse because it motivates a lot of people and helps in quality improvements."*

What kind of recognition is ideal?

*"To be provided an **OPPORTUNITY** to upgrade their profession, for example a **SCHOLARSHIP**."*

What kind of technology is ideal?

*"Preferably an **OFFICIAL** gadget and reliable source of **INTERNET**."*

What kind of training is ideal?

*"I would love to **DO DATA ANALYSIS** and **INTERPRETATION** and get a **CERTIFICATE**"*

Why we are excited about this study



Supported by **Evidence** from the literature



Potential for **High Impact** incentives



Doable in Malawi as part of the Kuunika project

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Zikomo Kwambiri!

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