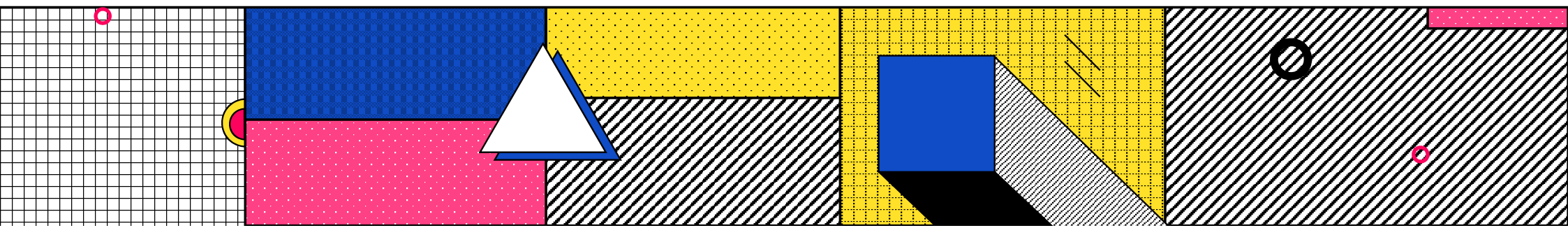
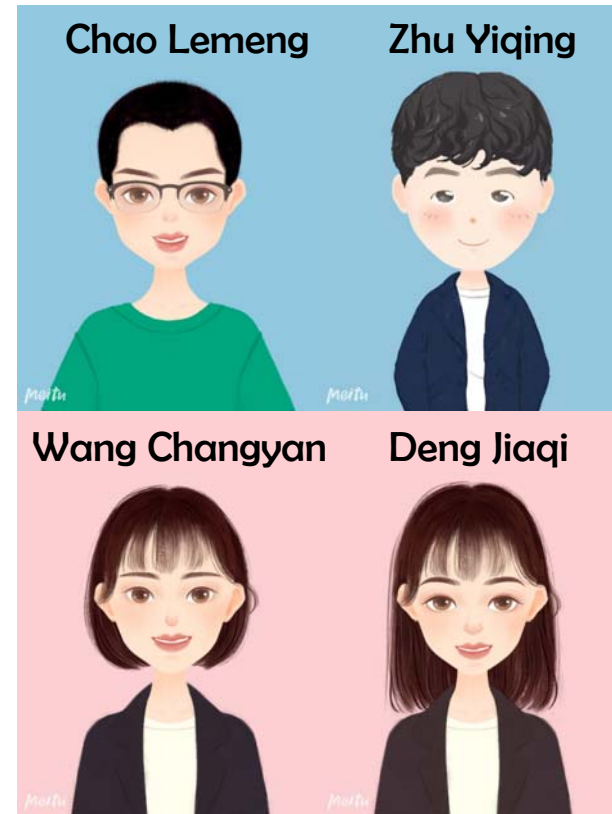


Community Seismic  
Resilience Assessment  
//The story of meat lovers//



## Group 2



## Meat lovers

Wang Changyan



meitu

Deng Jiaqi



meitu

## Canteens in THU



## Various canteens.....



Yushuyuan



Tingtaoyuan



Guanchouyuan

## Foods in THU



One day an earthquake comes.....

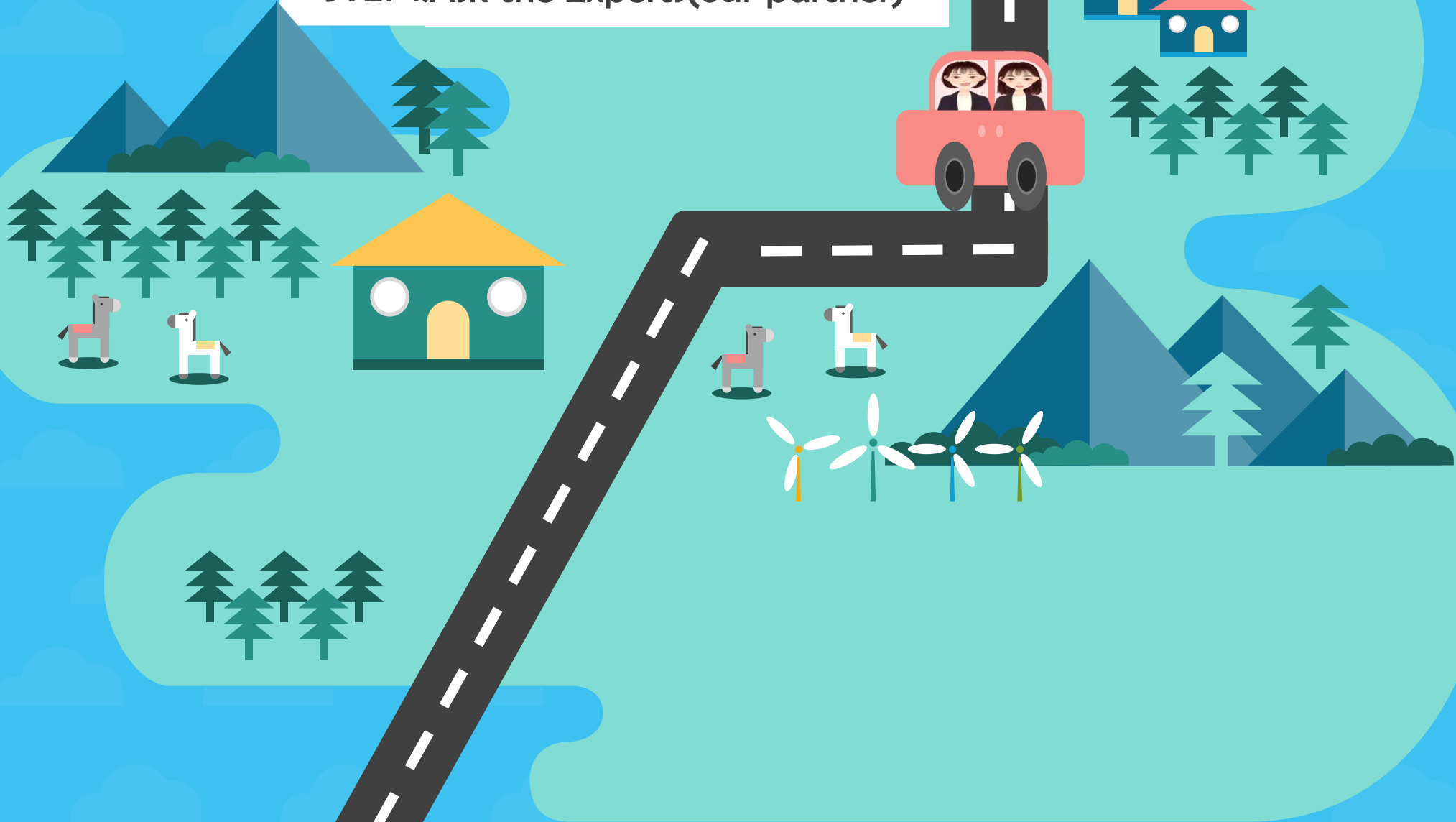


# WHEN CAN WE EAT MEAT

PRESENTED BY MEAT LOVERS



STEP1: Ask the Experts(our partner)

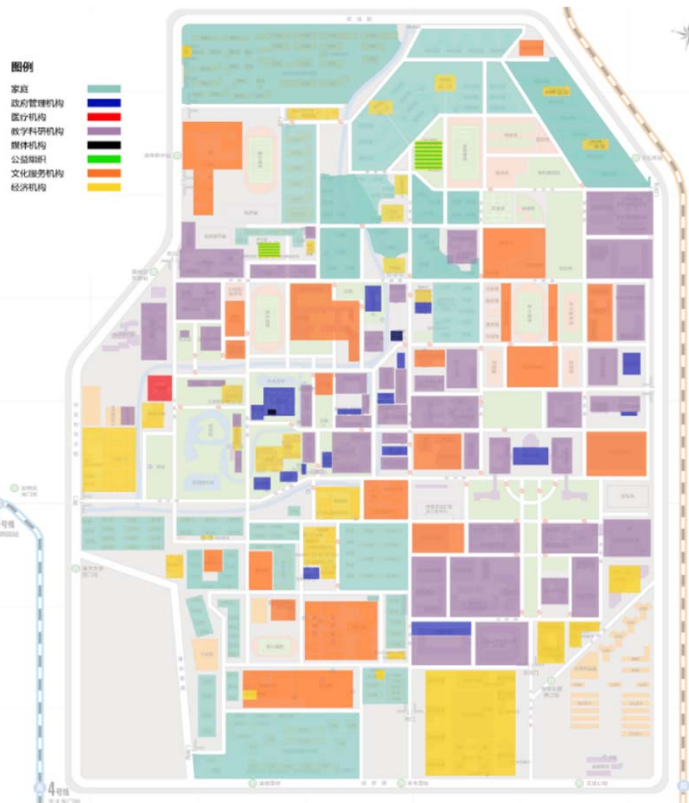




**The Tsinghua Community takes the Tsinghua University as the main part,  
with the campus comprises the most area of the neighborhood**



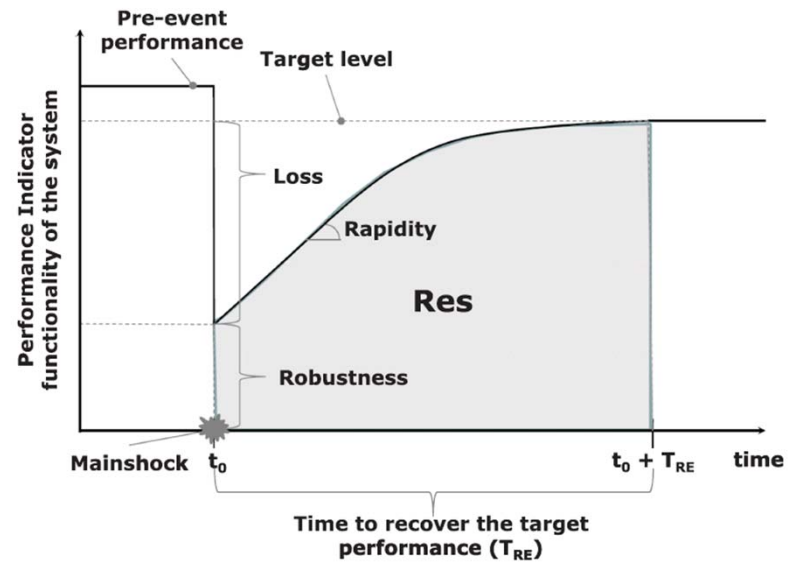
# STEP1: Ask the expert



- Urban economic resilience

- Shock
- Recover
- Area ratio

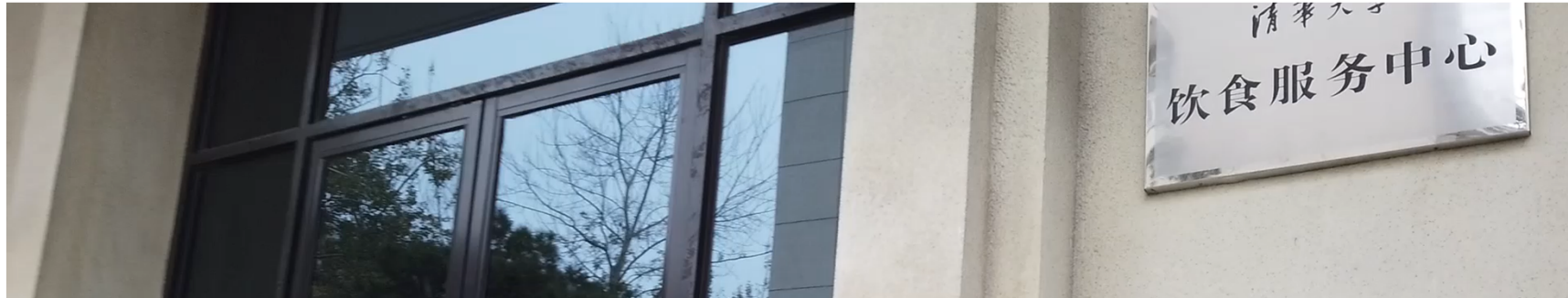
$$R(\vec{r}) = \int_{t_{OE}}^{t_{OE}+T_{LC}} Q_{TOT}(\vec{r}, t) / T_{LC} dt$$



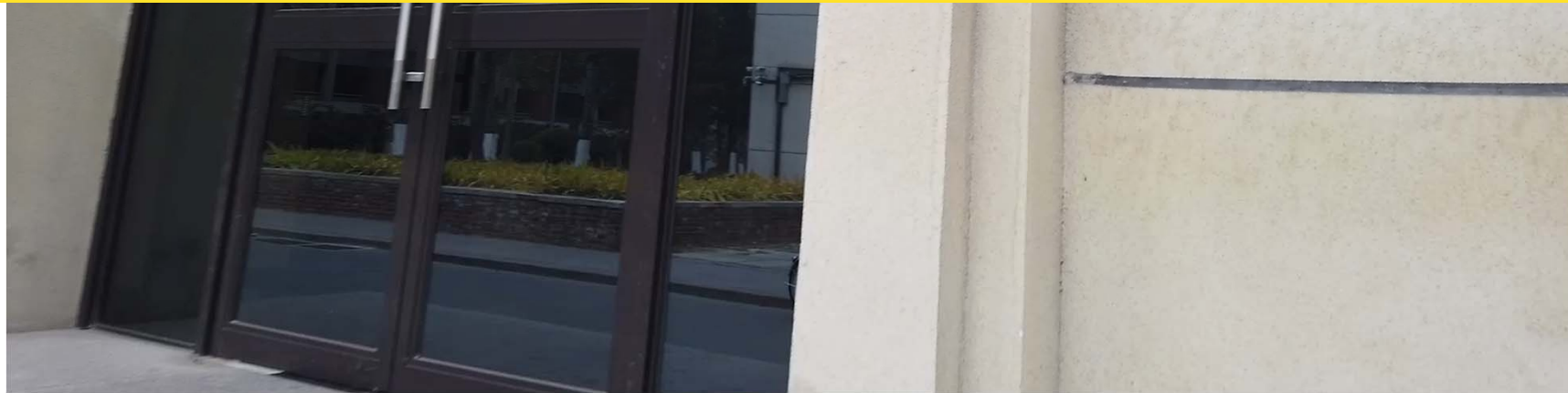


STEP2:Where meat comes and where meat goes?

## STEP2:Where meat comes and where meat goes?

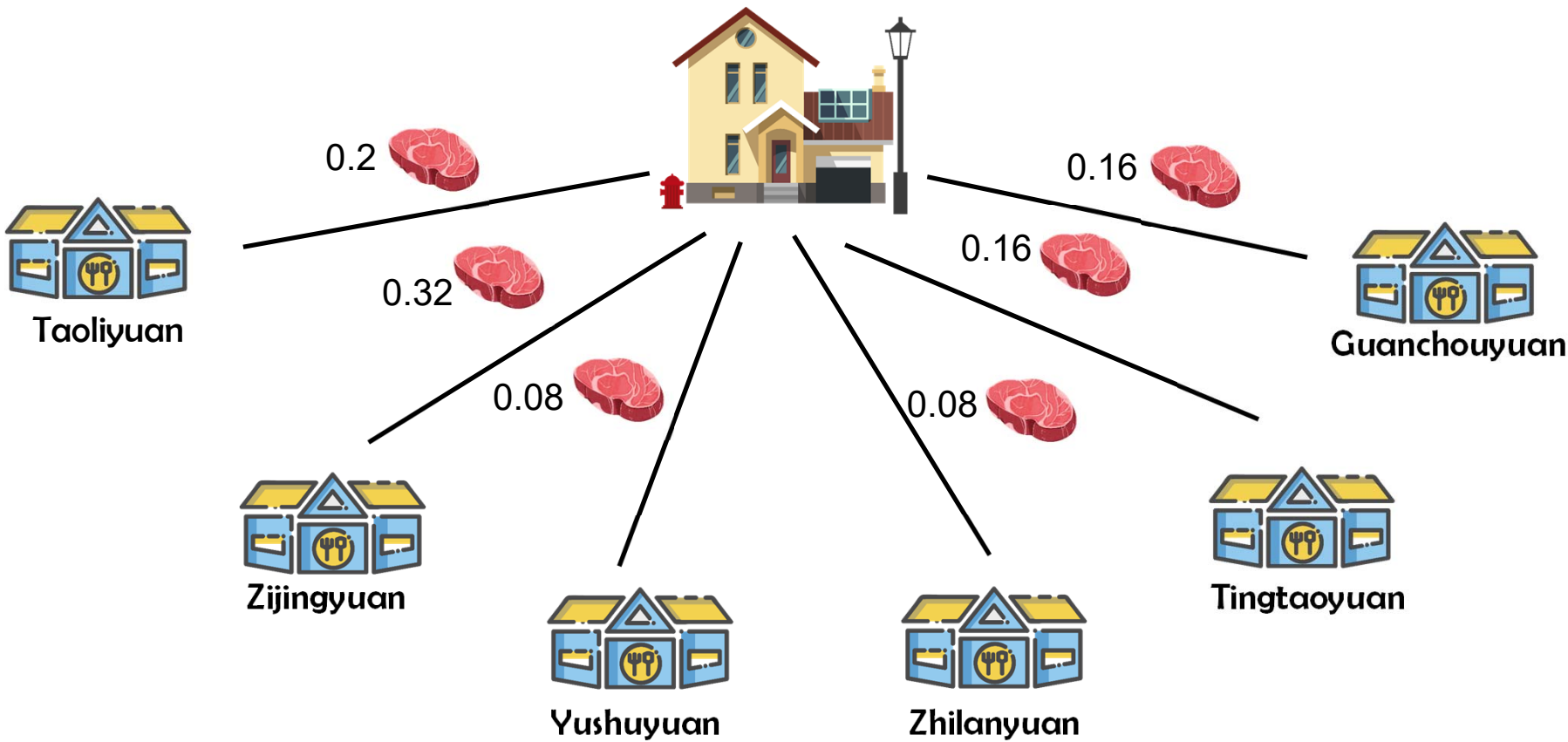


We came to Tsinghua University Food Service Center

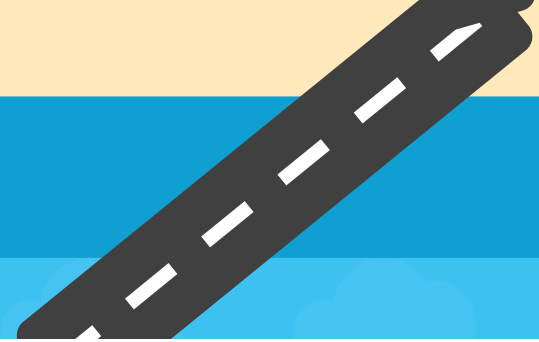
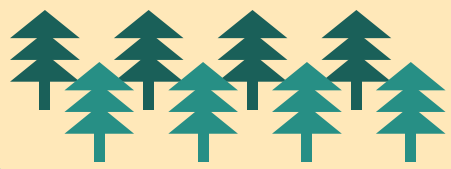
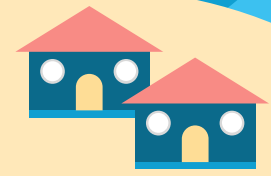
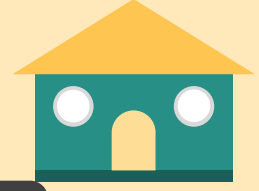
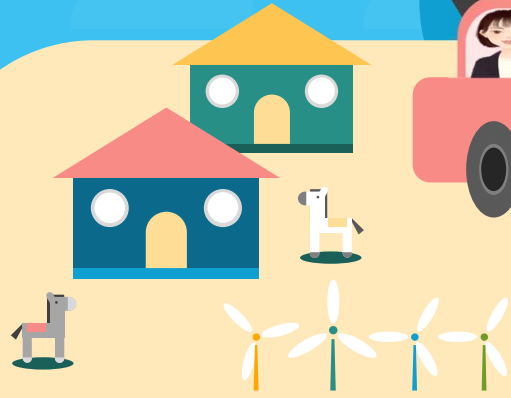


# STEP2:Where meat comes and where meat goes?

Buying office and packinghouse



STEP3:when can I eat all the meat?



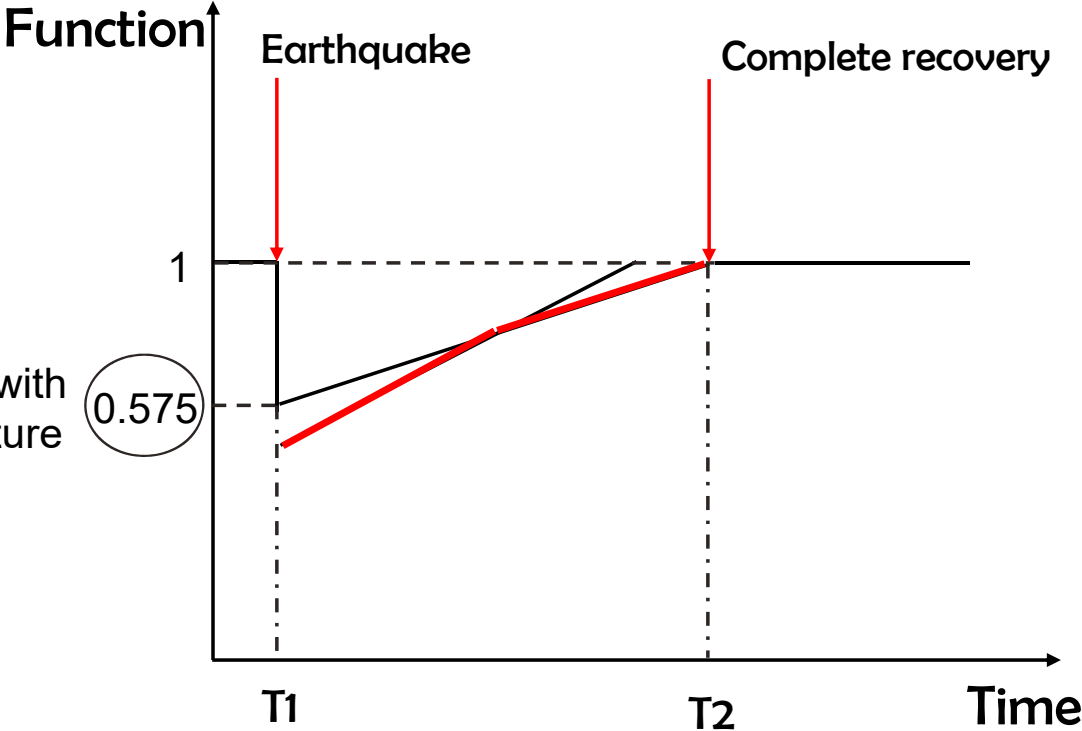
# STEP3:when can I eat all the meat?




Taoliyuan  
60%



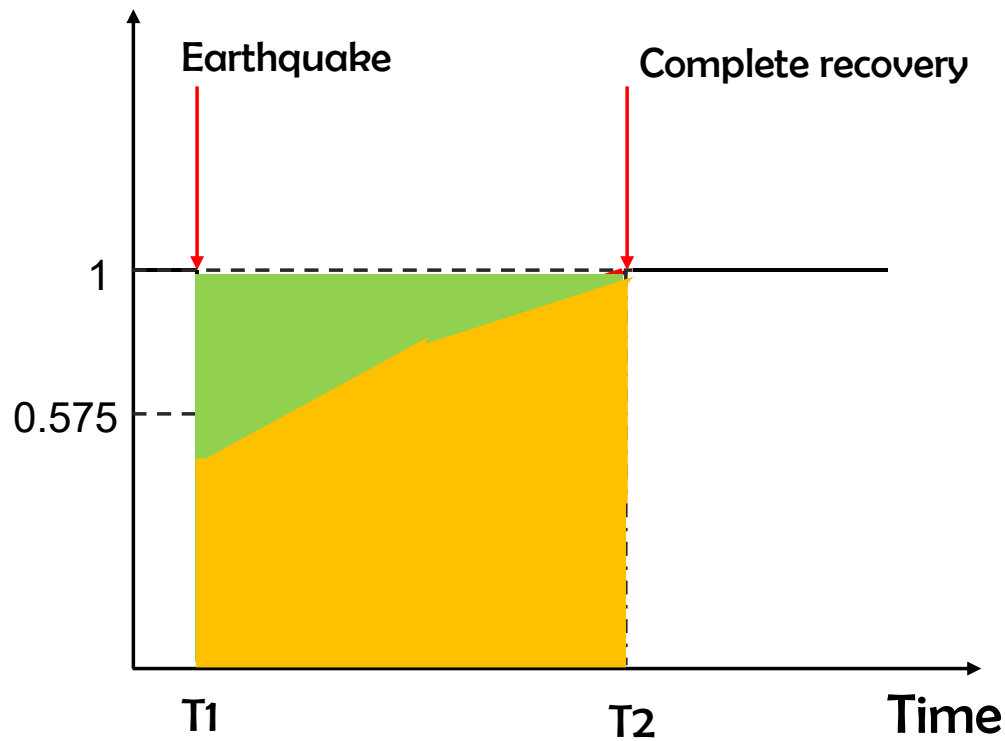
Buying office and packinghouse  
50% ✓





Step 4: Which canteen can I eat more during the recovery period?

## Step 4: Which canteen can I eat more during the recovery period?



$$\text{INDEX} = \frac{\text{Actual Performance}}{\text{Undisturbed Performance}} \times 100\%$$



Undisturbed  
Performance



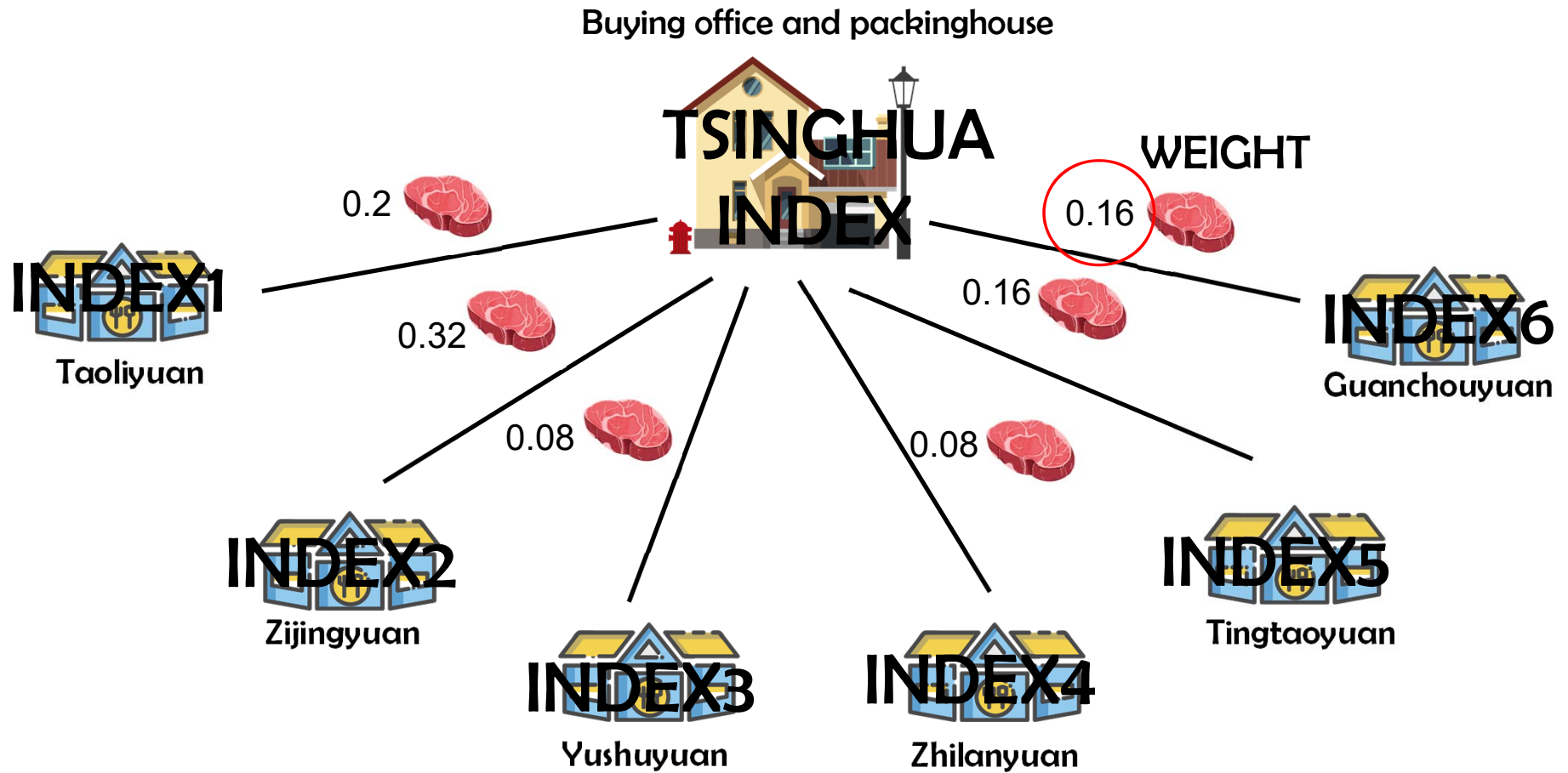
Actual  
Performance





STEP 5: How to assess a community?

## STEP 5: How to assess a community?



## STEP 5: How to assess a community?

**TSINGHUA INDEX**

=

$$\sum_{k=1}^6 INDEX_k \times WEIGHT_K$$

**ECONOMIC RESILIENCE**

## STEP 5: How to assess a community?

NETLOGO

SYSTEM  
DYNAMICS



## STEP 5:How to assess a community?

With different earthquake magnitudes...

	Weight	0.2g	0.3g	0.4g
Taoliyuan	0.20	94.57	87.89	80.53
Zijingyuan	0.32	85.13	82.28	68.15
Zhilanyuan	0.08	94.40	86.70	82.55
Yushuyuan	0.08	94.40	86.70	82.55
Tingtaoyuan	0.16	78.93	78.87	78.87
Guanchouyuan	0.16	90.00	78.75	78.75
Economic resilience	-	<b>88.29</b>	<b>83.00</b>	<b>76.34</b>

## **SUMMARY**

**Economic resilience is capability of earthquake resistance and seismic recovery.**

**STEP 1 : Make clear about the origin and destination of economic element you study.**

**STEP 2 : Is there some economic relationships among economic units? If yes, find them!**

**STEP 3 : Calculate their indices in term of their relationships.**

**STEP 4 : Sum them according to their weights.**

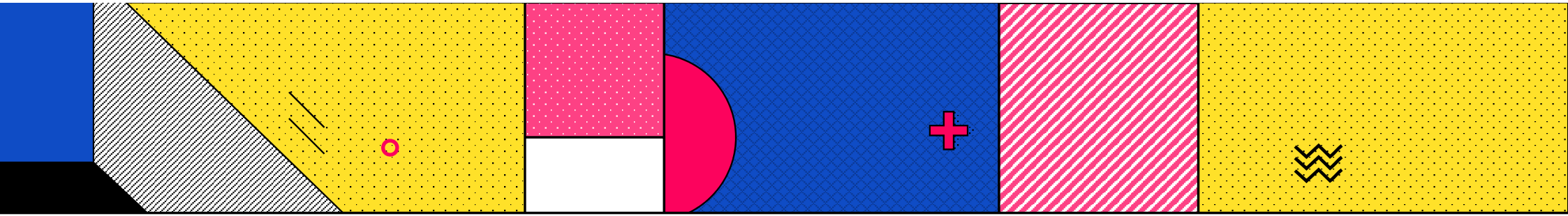
## CONTRIBUTIONS

- Enhance the defensive and rescue capability of a community
  - Through the construction of emergency command system, the construction of rescue forces, scientific and reasonable reserve of emergency materials and so on to enhance the community's defense and rescue capabilities.
- Arouse earthquake risk awareness
  - Through the publicity and education of earthquake prevention and disaster reduction, emergency drill, earthquake risk source identification and disaster assessment to arouse the government and the public's awareness of earthquake risk prevention.









THANK YOU

