Presentation by
Nafiz Ahmed Sargis Arpita Saha Fariha Mirza

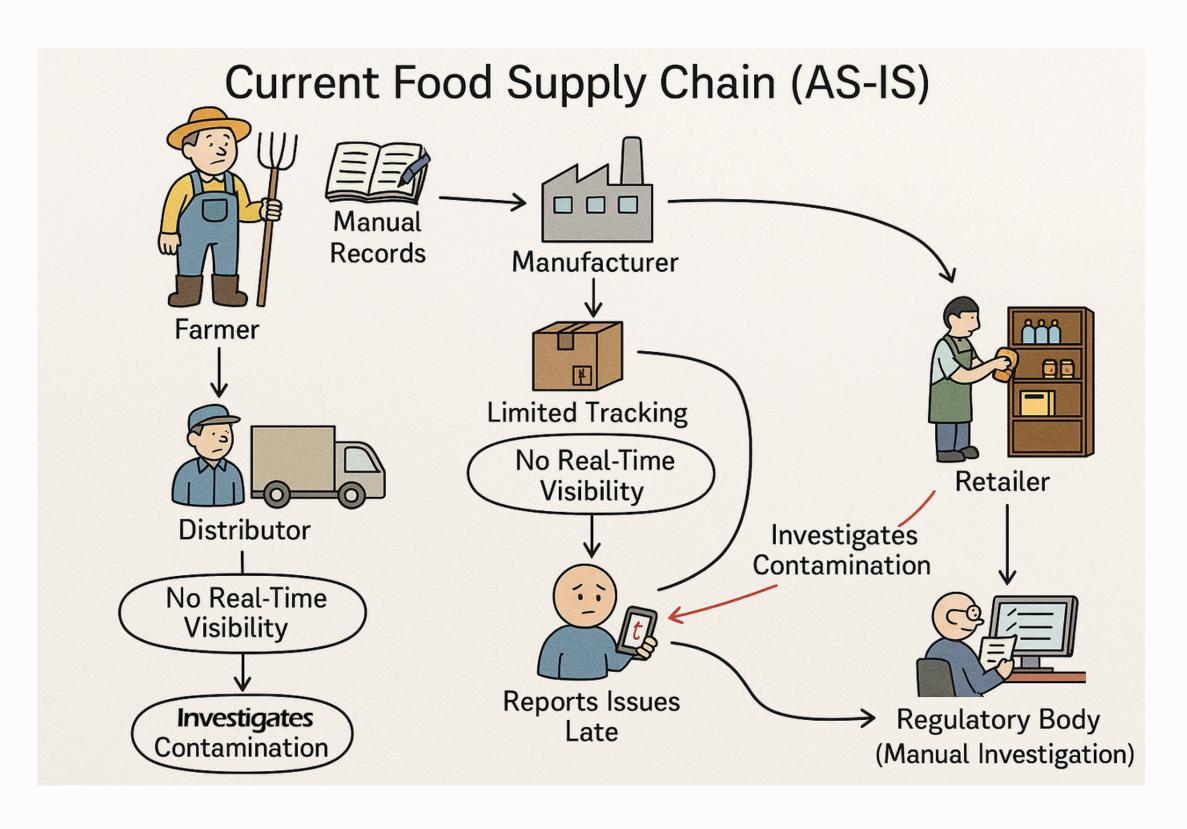


Safe Food: Food traceability system for agricultural products

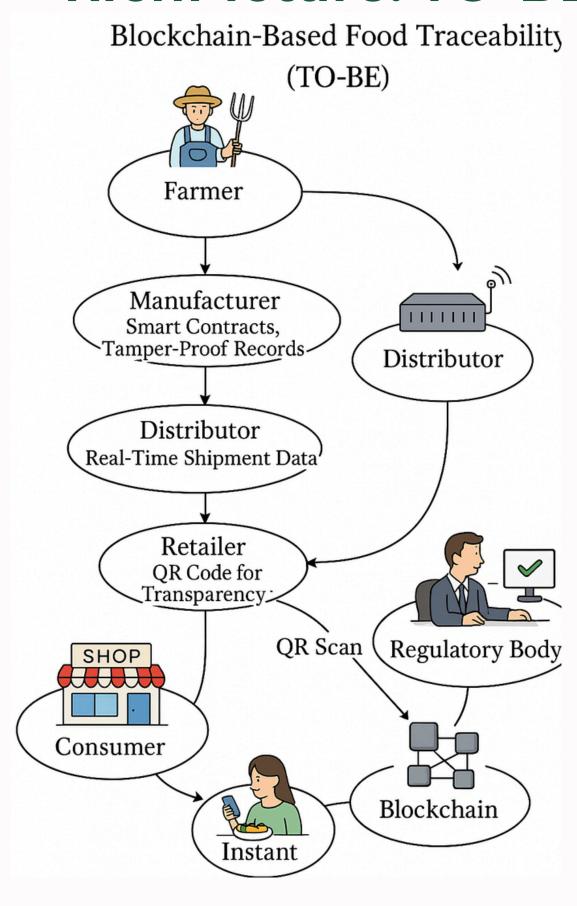


## Rich pictures AS-IS vs. TO-BE

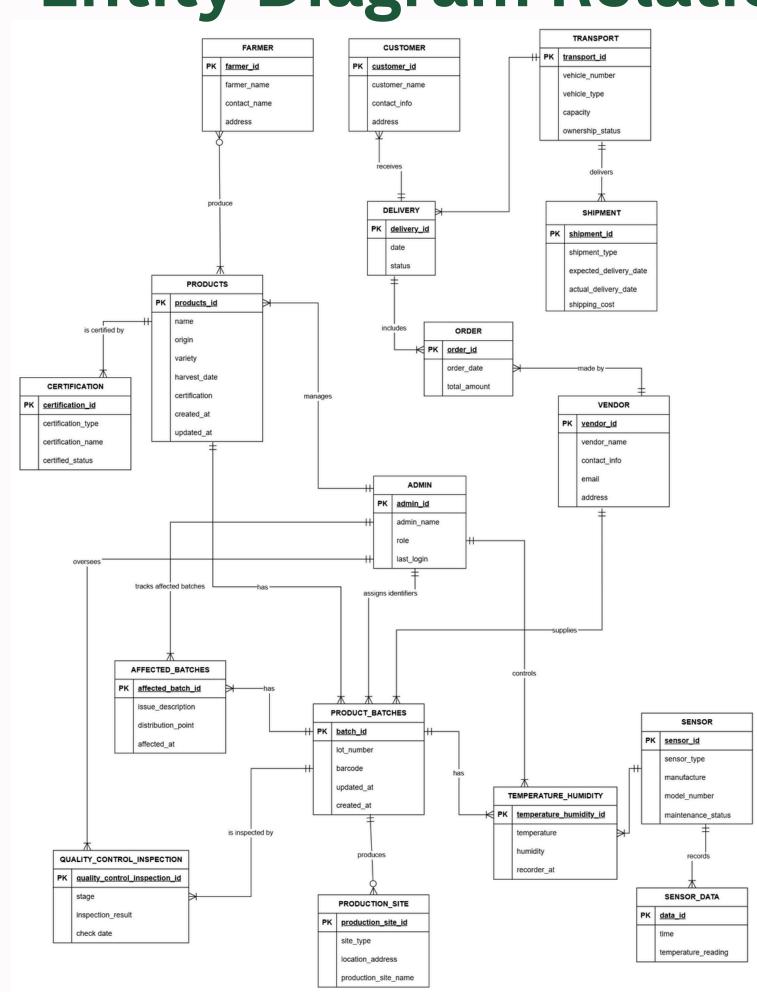
### **Rich Picture: AS-IS**



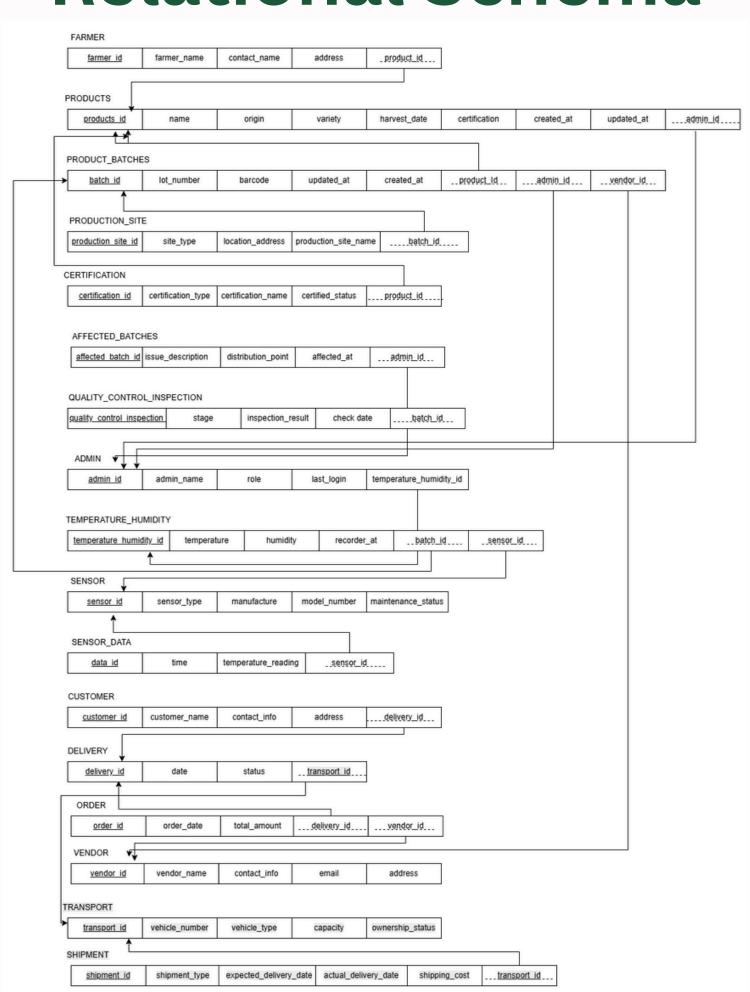
#### RichPicture: TO-BE



# **Entity Diagram Relation**



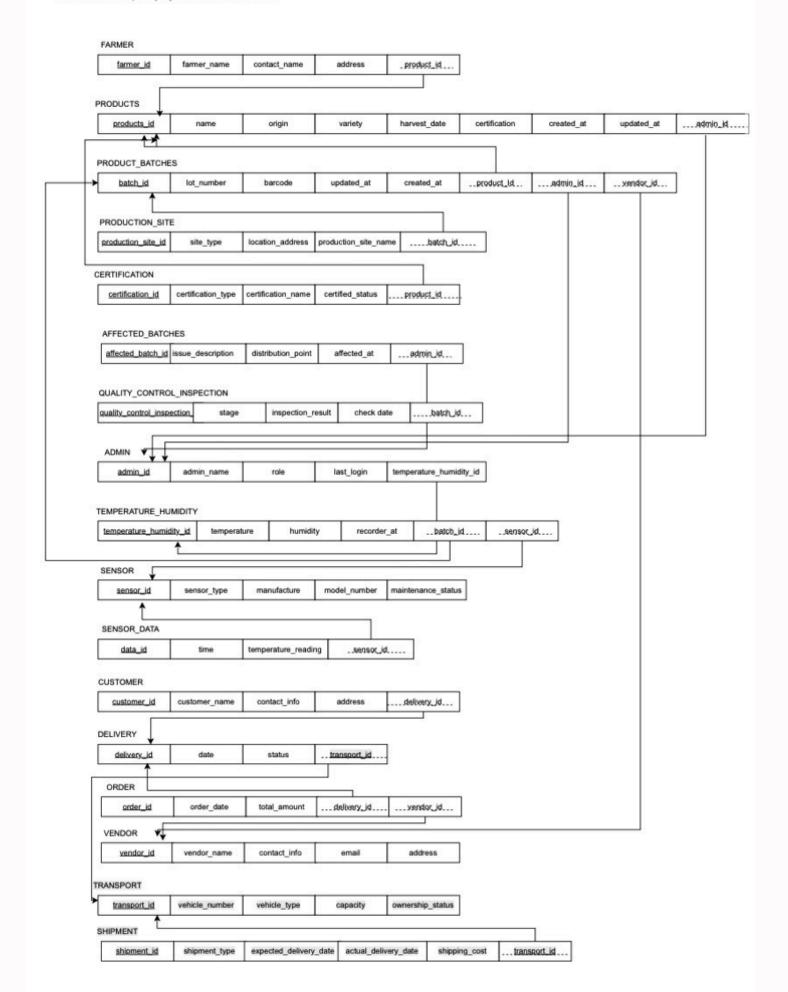
# Relational Schema

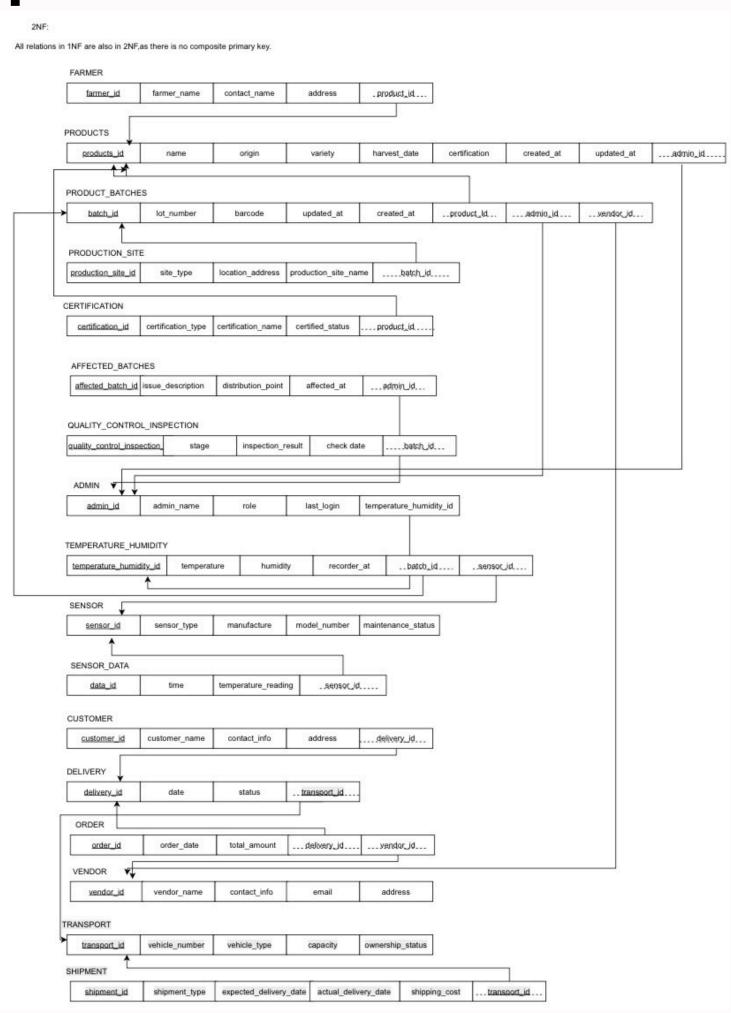


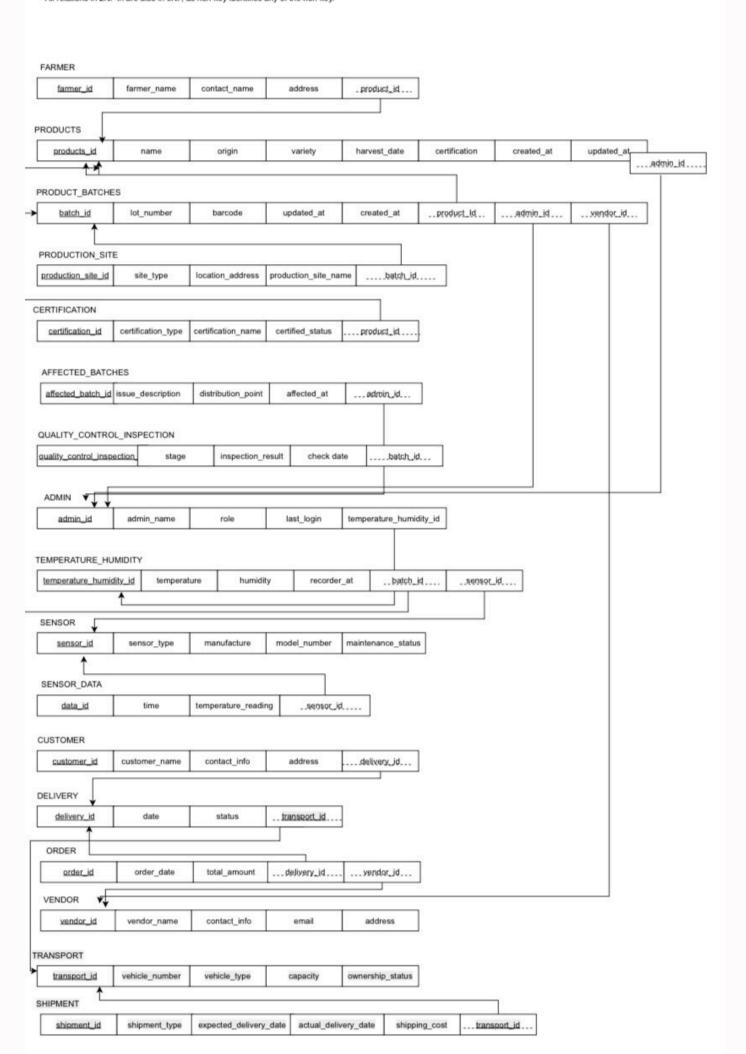
1NF:

### Normalization

All the relations have primary keys. So the relations are in 1NF.







BCNF: All relations in 3NF are also in BCNF, as non-key identifies any of the primary-key or part of the primary-key. FARMER farmer\_name contact\_name address .product\_id ... farmer\_id PRODUCTS certification created\_at updated\_at ...admio\_id... name origin variety harvest date products\_id PRODUCT\_BATCHES barcode updated\_at lot\_number created\_at ..product\_ld .. ....admio\_id.... ...vendor\_id... batch\_id PRODUCTION SITE location\_address production\_site\_name production\_site\_id .....batch\_id... CERTIFICATION certification\_id certification\_type | certification\_name | certified\_status | ...product\_id ... AFFECTED\_BATCHES affected batch id issue description distribution\_point affected\_at ...admin\_id... QUALITY\_CONTROL\_INSPECTION quality\_control\_inspection\_ inspection\_result check date ...batch\_id... ADMIN ▼ admin\_name temperature\_humidity\_id admin\_id last\_login TEMPERATURE\_HUMIDITY temperature\_humidity\_id humidity recorder\_at ..batch\_id... \_sensor\_id\_\_\_ SENSOR sensor\_id manufacture model\_number maintenance\_status SENSOR\_DATA data\_id temperature\_reading \_sensor\_id\_\_\_ CUSTOMER customer\_name contact\_info customer\_id address ...delivery\_id... DELIVERY delivery\_id status transport\_id... ORDER order\_id order\_date ...delivery\_id .... ..yendor\_jd... VENDOR vendor\_name contact\_info address vendor\_id TRANSPORT vehicle\_number vehicle\_type capacity ownership\_status transport\_id SHIPMENT shipment\_id shipment\_type expected\_delivery\_date actual\_delivery\_date shipping\_cost \_transport\_id ...

