Bank Machines and Watermelons

Now what do watermelons and bank machines have in common, you might ask? Have you ever left your ATM card in a bank machine? Well, thousands of people do this every day. What happens then? The machine "swallows" the card before the next person has a chance to pull up to the machine and possibly steal the card. The card is retrieved by the bank. Then a bank officer has to spend time contacting the card holder, asking them to return to the bank. When they return, an ID check must be made and then the card is returned or possibly a new card must be ordered, stamped, and mailed. And in the mean time, a temporary card may be issued with all the normal PIN protocols needing to be done.

A lot of wasted time! Could this time be used for doing more productive things (selling bank products, talking to customers about services, etc.)? And while the bank officer is wasting time doing this, a new customer or a customer with a new business inquiry is left waiting in line a bit longer. Bank of America has solved this problem by immediately ejecting the card after the customer has logged in with the proper password. This is use of the TRIZ inventive principle, "Do It in Advance" or "Preliminary Action", #10 on your list of 40 principles. You can find this suggestion at the intersection of the improving feature "loss of substance" and the worsening features of "function efficiency", "reliability", "control complexity", or "automation". All that was needed was a simple reprogramming of the ATM machine--no fancy new technology.

Now how about watermelons? They have an interesting shape, don't they? It's unique. But it has a major deficiency. The shape is very inefficient in terms of the use of space. When shipping bulk watermelons, a lot of wasted volume is shipped because the watermelons don't pack together efficiently. The shape is a result of the natural growing pattern of a watermelon. Here's the solution--from Japan:

If you place the watermelon seed and soil in a container where it MUST conform to a given shape, it will grow into a cubic structure which is far more efficient in its use of shipping, wharehousing, and retail store shelf space. In this case, "productivity" is what we want to improve, and "shape" is what worsens. At this intersection of our famous 60 year old contradiction table, you will find one of the suggested principles, "Do It in Advance".

Both of these challenges could also have been solved with the two initial steps in the TRIZ problem solving algorithm without needing the contradiction table. What is the ideal result? (Cards are never left in the ATM machine; watermelon shipments have zero wasted space). What resources do we have? (ATM software program; shipping container). Whatever TRIZ tool works for you--just don't forget the fundamentals of generalizing the problem, clearly stating the IFR (and the contradictions that keep it from being achieved), and thoroughly look at the resources already existing in the system (including the sub-system and super-system).

There really are no new problems--just new ways of applying known solutions in new ways. Keep generalizing those problems and look for the general solutions that already exist!
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