

Track-A-Thon Solution

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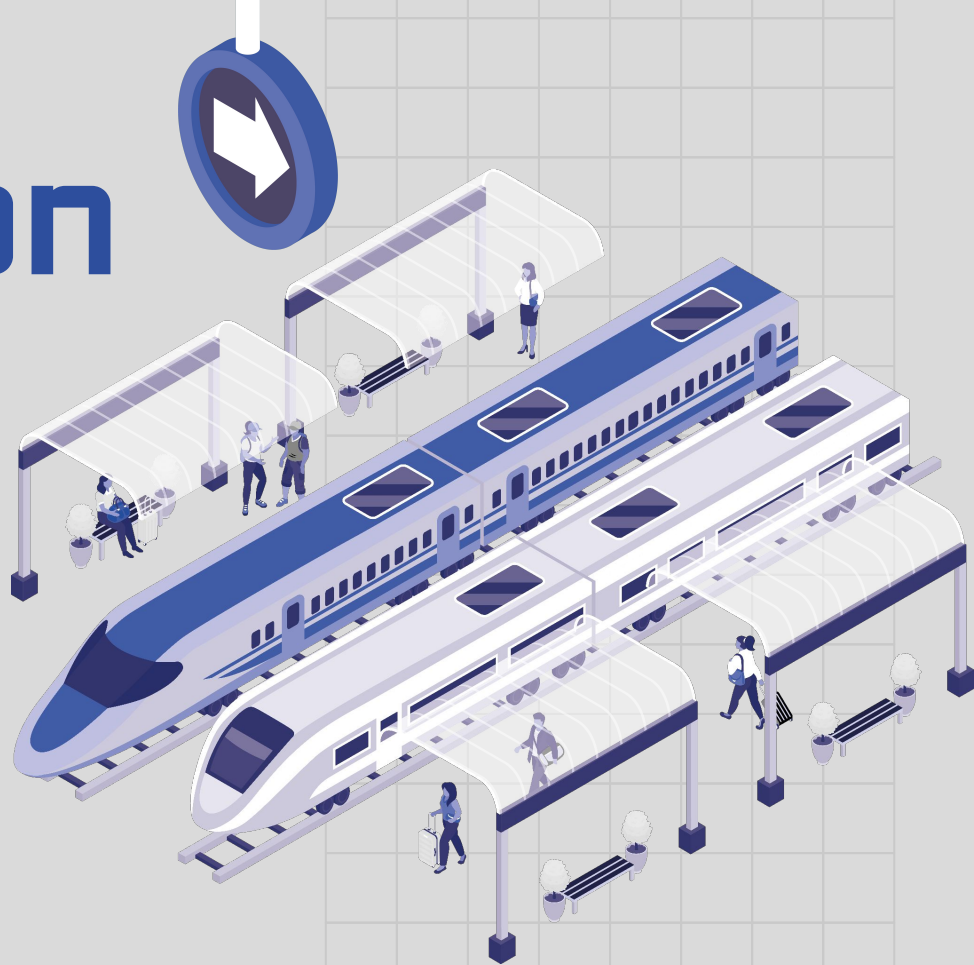
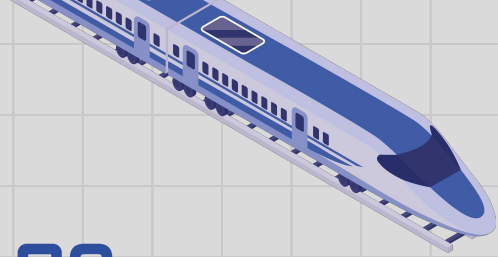


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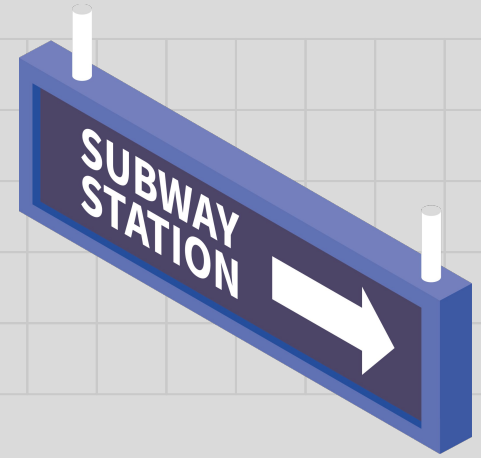
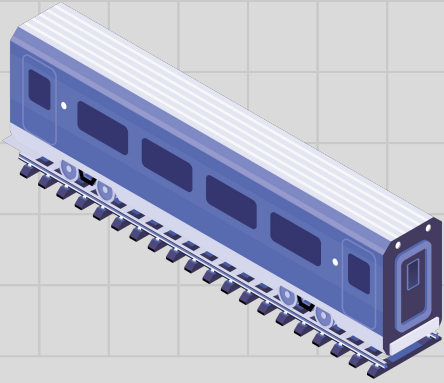
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Safety issues

What are the safety issues faced at rail grade crossings or train tracks?

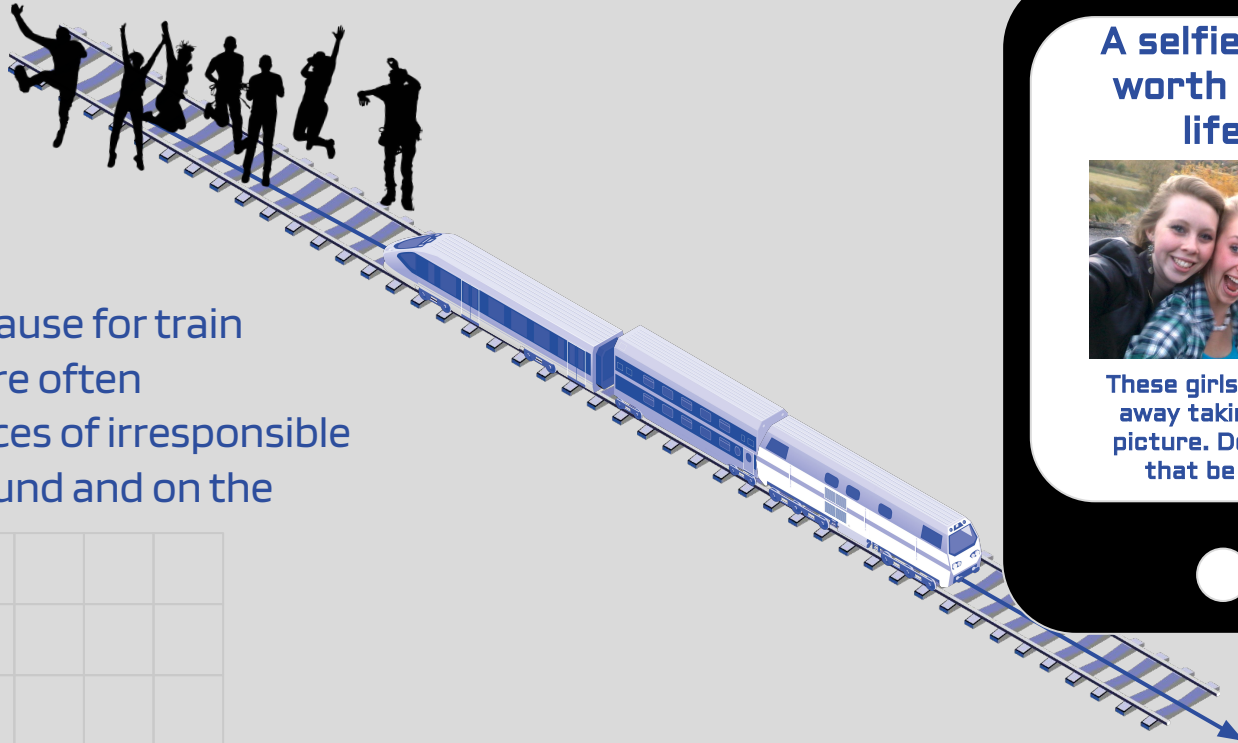


There are over

4,000

people hurt or killed by
trains every year

Irresponsible railroad activity



One great cause for train accidents are often consequences of irresponsible activity around and on the tracks.

A selfie isn't worth your life.



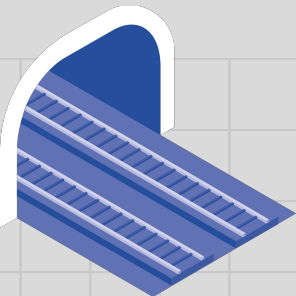
These girls passed away taking this picture. Don't let that be you.

Safety Issues



Getting hit:

If you are in a situation where your stuck or just on the train track you will get hit, because It takes the average freight train traveling at 55 mph more than a mile—the length of 18 football fields—to stop. Trains cannot stop quickly enough to avoid a collision.

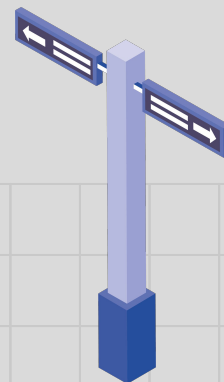


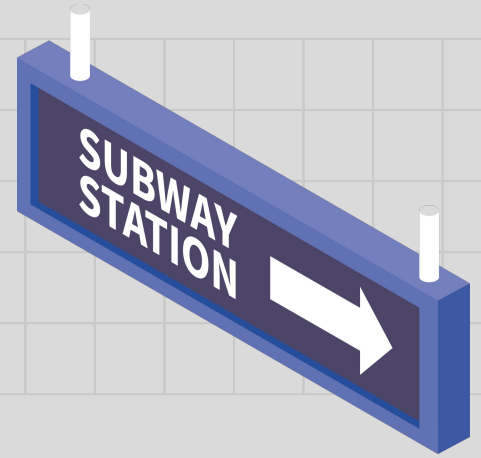
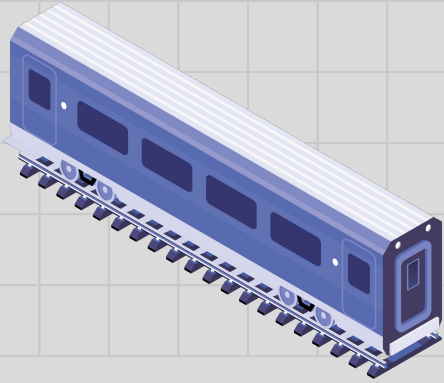
Unsafe crossing

Drivers often think that they can make it across a track even if they have already been warned of an approaching train.

Trespassing along railroad:

Trespassing along railroad rights-of-way is the leading cause of rail-related deaths in America.



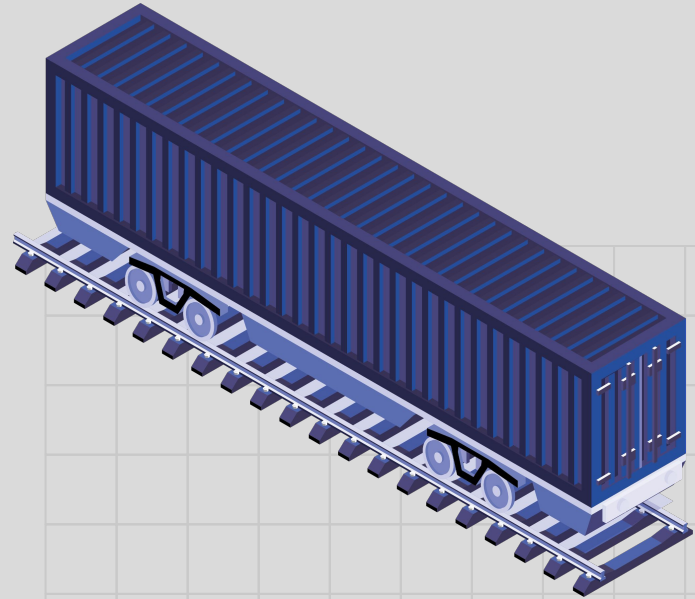


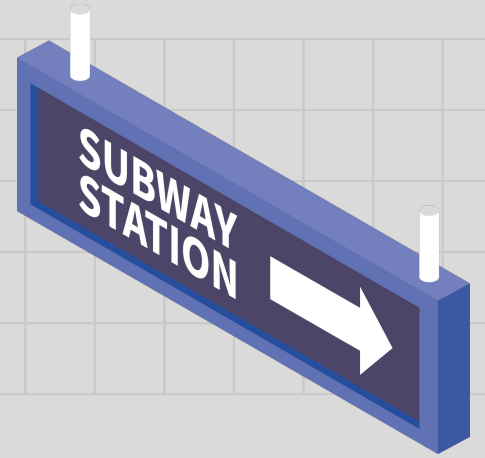
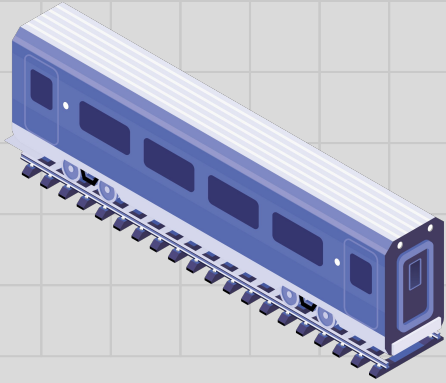
Importance

Why is rail crossing safety important to us and our community?

Why train safety is important to us and our community

Train safety is very important to us and our community because there are multiple train crossings in our community. In fact there is one just across from our school. A few of them have alarms and level crossing signals, but some have little safety features that is dangerous to people in our community.



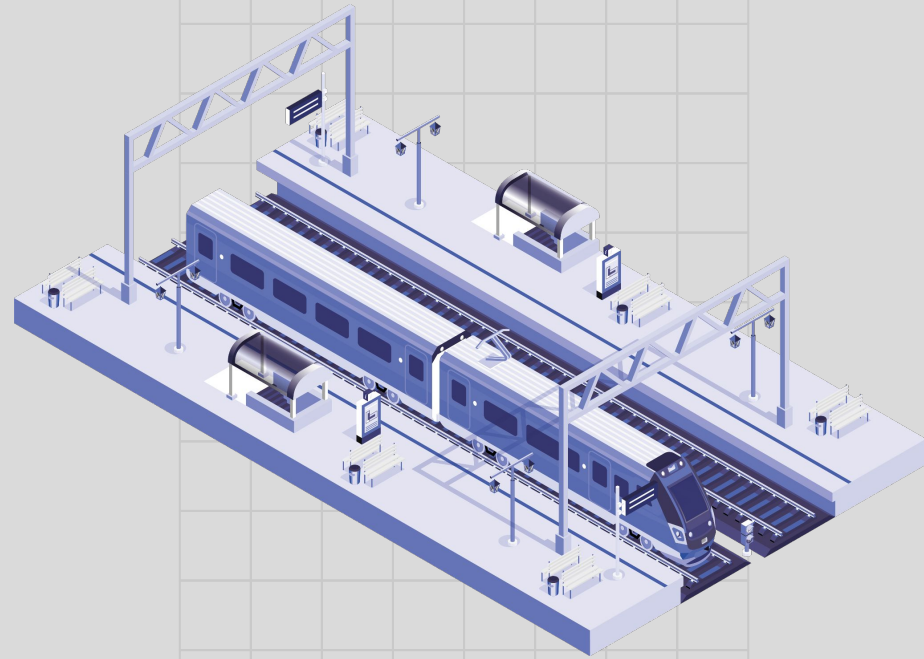


Innovation Overview

Come up with a rail grade crossing safety innovation that could help drivers.

Innovation Overview

Our innovation idea is to have multiple warning systems and a physical barrier to keep drivers off the railroad track while the train is approaching. We plan to have traffic spikes to keep cars from entering the track. We also will have both alarms and flashing lights to alert drivers to a incoming train.

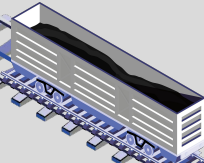


Train safety timeline

First, when the train is one minute away from the crossing, the alarms and lights will go off.

1

2



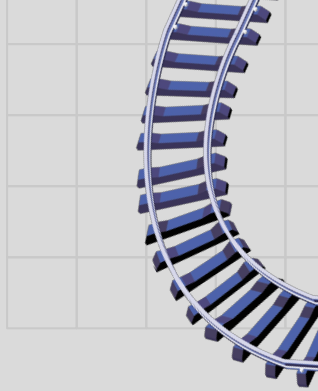
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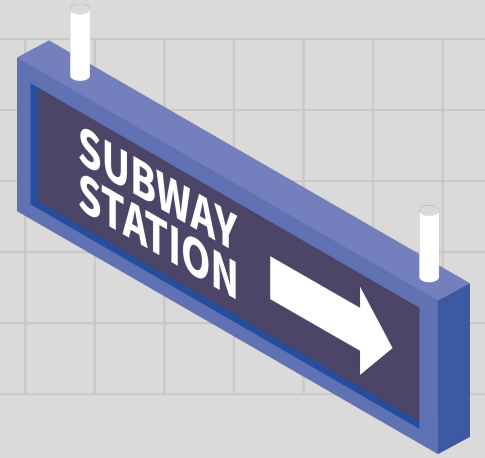
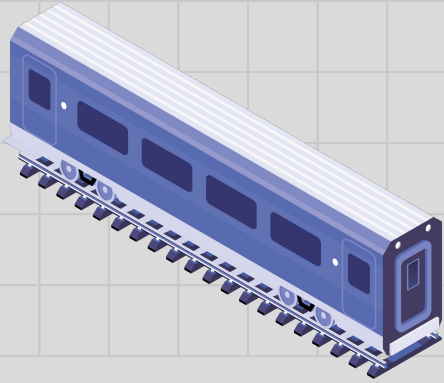
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Then, when the train is thirty seconds away, the traffic spikes will go up

Next, as the train passes, the alarms will stop.

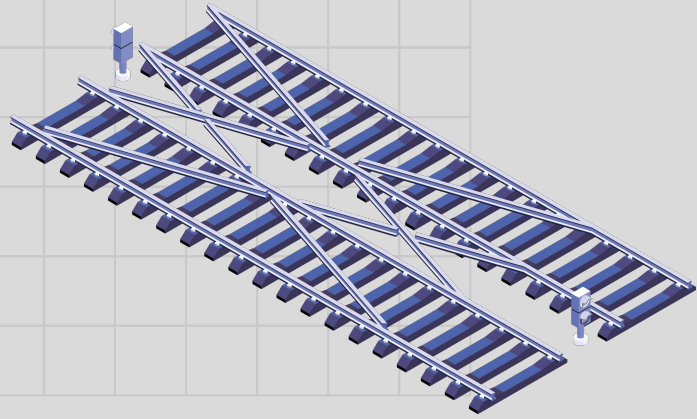
Finally, once the train is a safe distance away the crossing spikes will lower





Traffic spikes

What traffic spikes are and how they can help

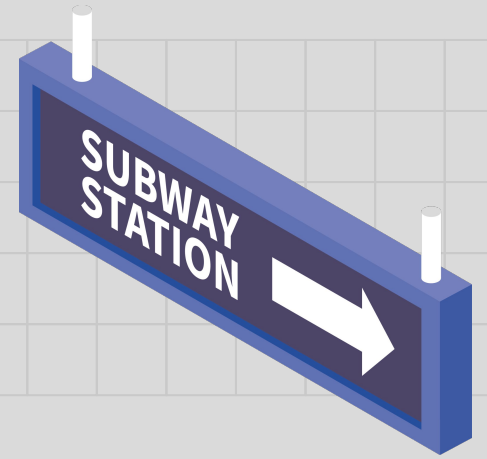
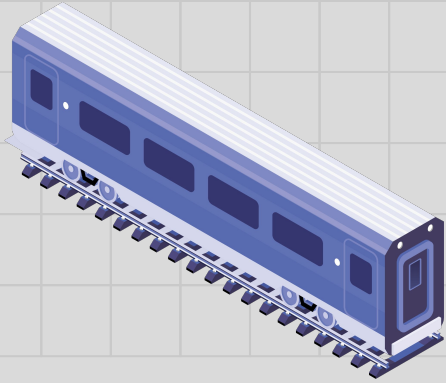


Traffic Spike

A traffic spikes are spikes that go up and down. When the spikes go up the cars can't go passed because the spikes pop the car's tires. The spikes would go up 30 seconds after an alarm and 30 more seconds before the train comes.

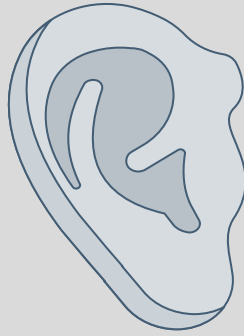


These traffic spikes are one way.

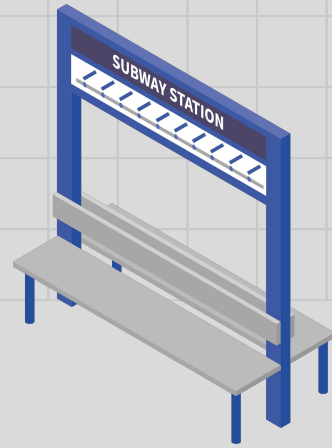


Alarms and warning lights

Come up with a rail grade crossing safety innovation that could help drivers.



Alarms

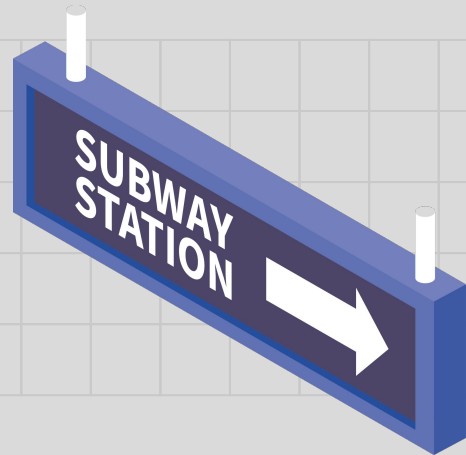
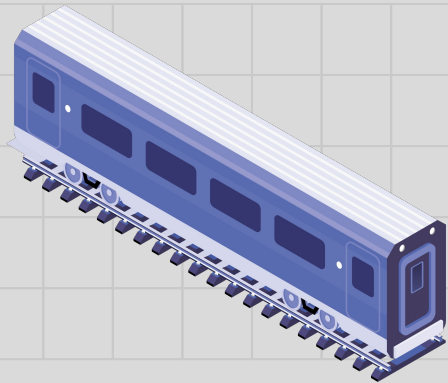


- The alarms will go off one minute before the train comes.
- The alarms will alert drivers that the train is coming.
- Our alarms will be powered by solar panels

Warning Lights



The warning lights will come on to warn people about the incoming train. It is important to have a visual and an audio warning to avoid any casualties.

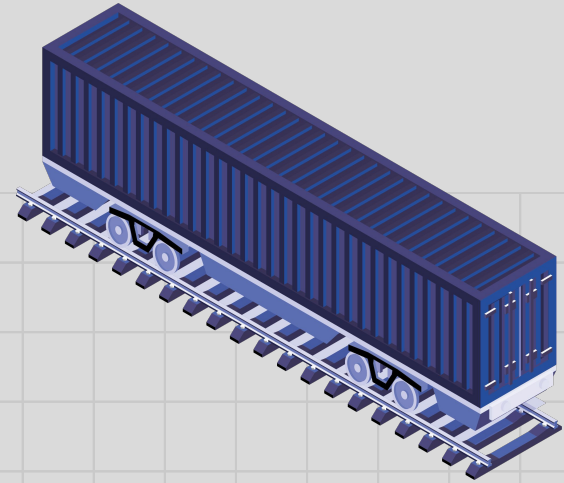


Saving lives

How our innovation will save lives

Saving lives

This invitation will save lives by warning and stopping cars from going onto the track. The traffic spikes will allow drivers to get out from the tracks once on, but not onto the tracks while a train is in the area. Both the warning lights and the alarms warn passing cars of an approaching train.



Resources

- *Selfie tragedy forever impacts those left behind.* UP. (n.d.). Retrieved March 30, 2023, from https://www.up.com/aboutup/community/inside_track/selfie-tragedy-12-7-2016.htm
- Indot. (2022, September 12). *Railroad crossing facts.* INDOT. Retrieved March 30, 2023, Indot. (2022, September 12). Railroad crossing facts. INDOT. Retrieved March 30, 2023, from <https://www.in.gov/indot/safety/traffic-safety/railroad-crossing-facts/#:~:text=At%2030%20MPH%2C%20it%20takes,to%201%C2%BD%20miles%20to%20stop.>
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