

ARE YOU READY FOR THE NEXT STEP?

PRE-FINAL CHALLENGE!



TO REACH THE FINAL ON THE 10TH OF DECEMBER, COMPETING TOGETHER WITH OUR DEVELOPERS TO BE THE **WINNER OF SCANIA STUDENT CHALLENGE 2020....**

YOU NEED TO:

1. SOLVE THE "**CARGO LOADING OPTIMISATION CHALLENGE**" & MOTIVATE SHORTLY WITH A FEW SENTENCES ON HOW YOU HAVE SOLVED IT.
2. ANSWER THE "**BONUS CHALLENGE**" BY ESTIMATE THE NUMBER OF CONNECTED VEHICLES.

NOTE!
THE **CARGO LOADING OPTIMISATION CHALLENGE** IS THE MAIN TASK. BUT WE WANT YOUR ANSWERS ON BOTH CHALLENGES.

- WHAT DOES **THE BONUS CHALLENGE** MEAN?
WHO KNOWS, BUT IT COULD GIVE YOU AN ADVANTAGE FURTHER ON... ☺

IMPORTANT!

SEND US THE ANSWERS TO:
STUDENT@SCANIA.COM

NO LATER THAN THE 6TH OF DECEMBER!

**ON MONDAY THE 7TH OF DECEMBER
WE WILL CONTACT YOU AND LET YOU KNOW IF
YOU HAVE QUALIFIED FOR
THE FINAL ON THE 10TH OF DECEMBER!**

GOOD LUCK!

/SCANIA-TEAM!

SCANIA



PRE-FINAL

1. CARGO LOADING OPTIMISATION CHALLENGE

BACKGROUND

TO BE ABLE TO DELIVER **MORE SUSTAINABLE TRANSPORT SOLUTIONS** TO OUR CUSTOMERS, SCANIA IS FOCUSING TO OPTIMISE CARGO USAGE.

THIS PROBLEM CHALLENGES YOU TO MAXIMISE THE VALUE OF CARGO WHEN LOADING A SCANIA TRUCK. YOU ARE PROVIDED WITH A CONTAINER OF LIMITED WEIGHT CAPACITY AND A COLLECTION OF ITEMS WITH DIFFERENT VALUES AND WEIGHTS. YOU HAVE ONLY ONE OF EACH ITEM TO CHOOSE FROM.

YOUR TASK IS TO MAXIMISE THE VALUE OF THE CARGO WITHOUT EXCEEDING ITS TOTAL CAPACITY.

DATA

CARGO WEIGHT LIMIT: **10000 KG**

DATA FILE: **LIST OF 100 ITEMS**. EACH LINE CONTAINS VALUE AND WEIGHT

[DOWNLOAD LOADINGDATA.TXT](#)

THE CORRECT ANSWER IS THE MAXIMUM VALUE OF THE CARGO WITHOUT EXCEEDING THE TOTAL WEIGHT CAPACITY



SCANIA



PRE-FINAL

2. BONUS CHALLENGE!

BACKGROUND

CONNECTED AND **AUTONOMOUS** VEHICLES ARE BECOMING CRUCIAL FOR INCREASING EFFICIENCY IN TRANSPORT AND IN VALUE CHAINS. USING REAL-TIME DATA FROM OUR CONNECTED VEHICLES, SCANIA HAS DEVELOPED SERVICES THAT LOWER FUEL CONSUMPTION AND MAXIMISE VEHICLE UPTIME, WITH CONTRACTS CUSTOMISED FOR EACH TRUCK BASED ON REAL-TIME USER DATA. THE RESULT IS FEWER AND USUALLY SHORTER STOPS, LESS WASTE FROM UNNECESSARY OIL CHANGES AND UP TO TWO DAYS' FEWER STANDSTILLS PER VEHICLE A YEAR.

THE QUESTION WE WANT YOU TO ANSWER IS:

- "HOW MANY CONNECTED VEHICLES DID SCANIA COLLECT DATA FROM DURING WEEK 48, 2020" ?

TO GIVE YOU SOME MORE FIGURES AND DATA REGARDING OUR CONNECTED VEHICLES,
CHECK OUT OUR ANNUAL REPORT FROM 2019:

[HTTPS://WWW.SCANIA.COM/GROUP/EN/HOME/INVESTORS/ANNUAL-REVIEW.HTML](https://www.scania.com/group/en/home/investors/annual-review.html)



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