ROADEX Network

For better rural roads

The role of eLearning and social media in rural road asset management

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Background The role of eLearning – Rural roads

- Traditional rural road asset management know-how is disappearing

  - People are retiring, practical "father-to-son" knowledge will be forgotten

  - Schools are focusing on digitalization

- Digitalization will change the practices in road asset management

  - We need the new knowledge, but also the old one

  - Information/data is getting more accurate and real-time

  - Road asset management is changing from reactive to pro-active

- Lack of research resources in different countries when current research focuses on "main roads"

- General trend is that the responsibility of private roads are moving from government to private road owners, and they need this same information to maintain the good conditions.

Background
The role of social media in rural road asset management

- The world has gone mobile
- Cars: cameras, GPS and accelerometer roughness measurements etc.
- More data to be enabled for the various purposes
- Anyone can report
- Data available for everyone

This brings great potential for rural roads asset management to use social media for monitoring the condition of the road using the data provided by the users, but also to provide information for the users when needed.

Generates pressure for the maintenance crew's to operate faster (Reaction time / Based on law and regulations)

Background The role of social media – Rural roads

Example: open social media group for reporting the road condition

07.06.2020

10.06.2020

Background The role of social media – Rural roads

Example: Porokello –App, for realtime reindeer warnings, alerts of high risk for reindeer crash

ROADEX Social media

- https://www.facebook.com/roadexnetwork
- Mainly for information sharing about ROADEX Network results, events and interesting observations world wide

About ROADEX eLearning

- eLearning is the output of the ROADEX Projects and has been developed by the ROADEX Partners.

- Including experiences and recommendations gathered by the author during numerous discussions with roads administrations and experts in the Northern Periphery area.

- The lessons also describes a range of well working practices and 'rules of thumb' that have been found to work well.
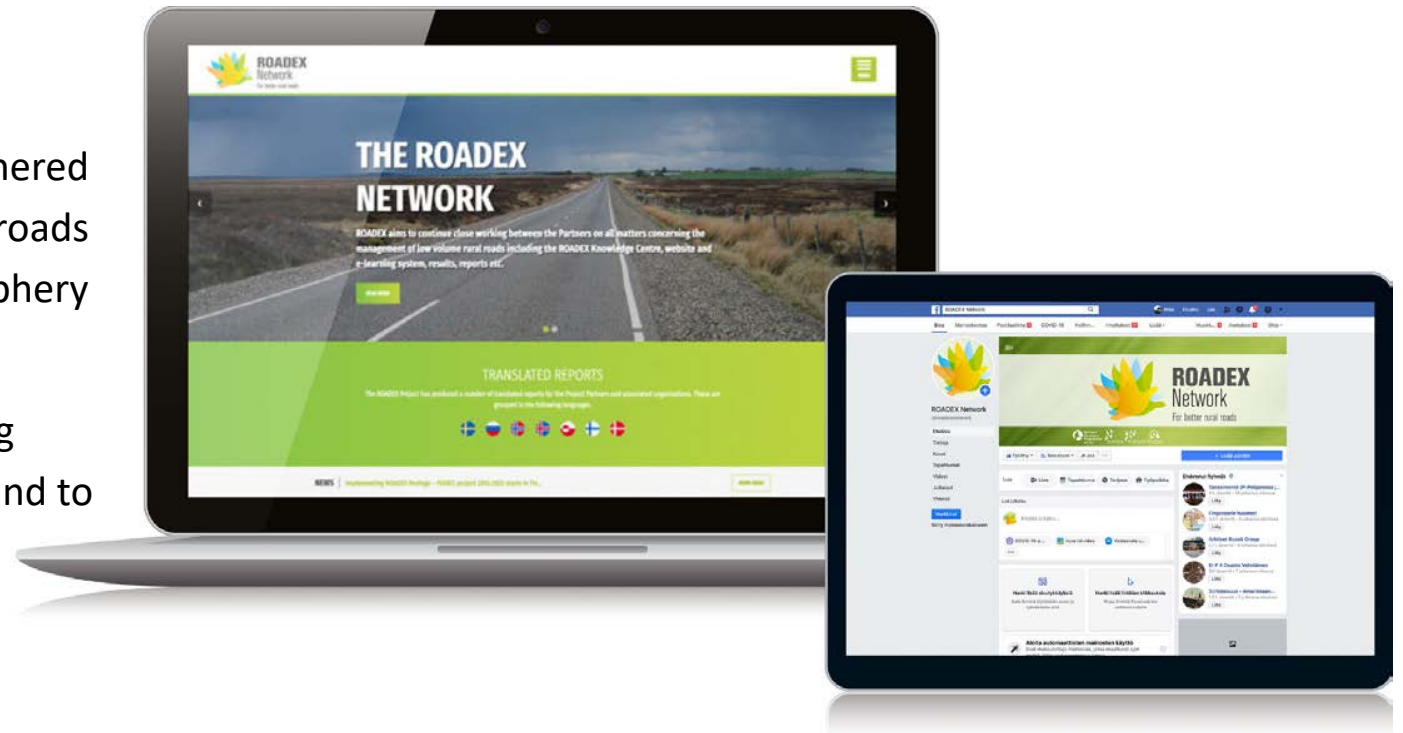
ROADEX eLearning, content

Contains 4 Lessons, with 6 language

- Permanent Deformation

- Roads on Peat

- Drainage of Low Volume Roads

- Environmental Considerations for Low Volume Roads

Practical information + test

We are currently updating the English versions of the eLearning lessons.

ROADEX eLearning, some examples
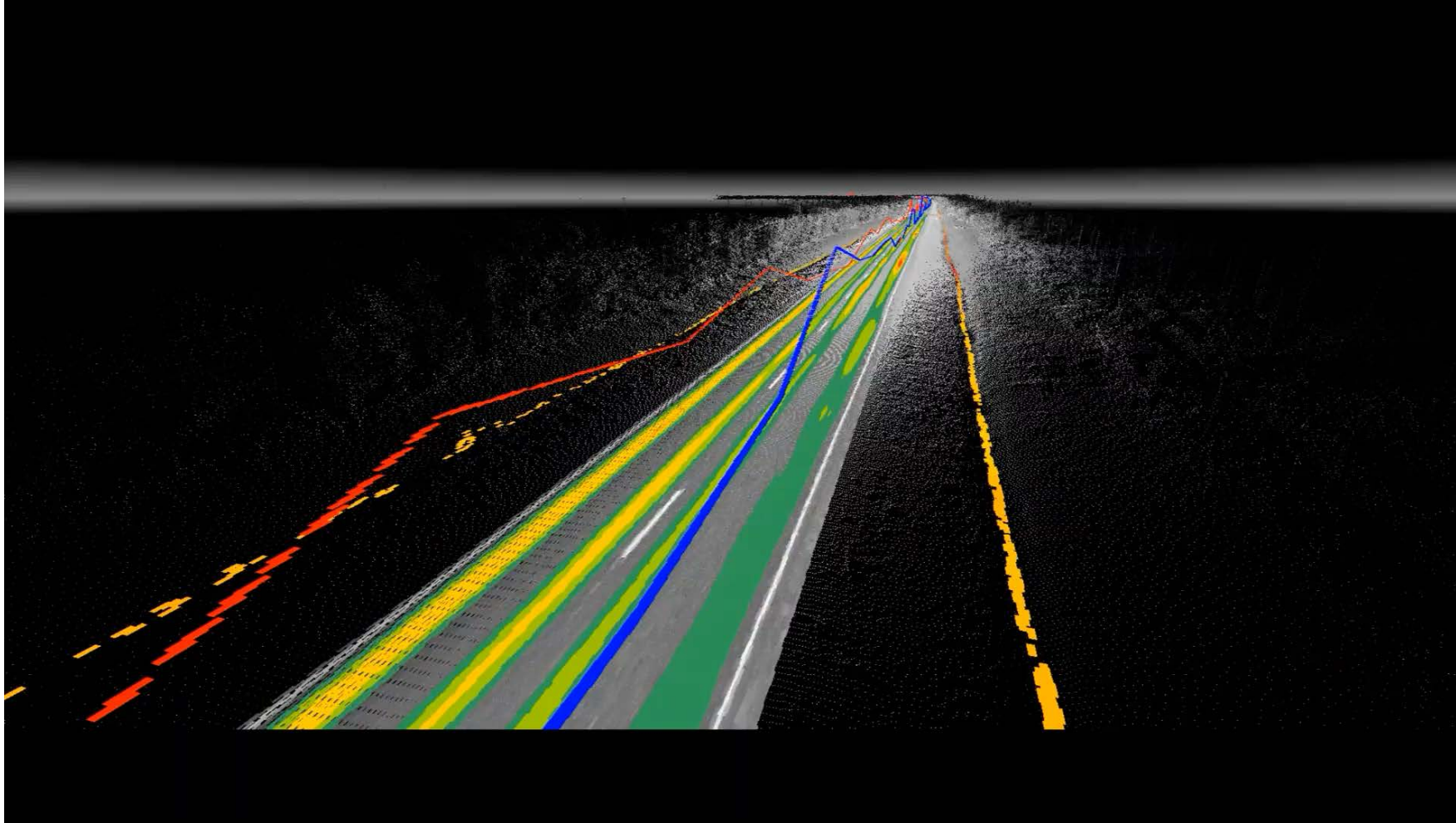
Point cloud data

Roadex has proved that drainage is very essential part in the road asset management.

This is a modern method to monitor the road and ditch condition

ROADEX eLearning, some examples
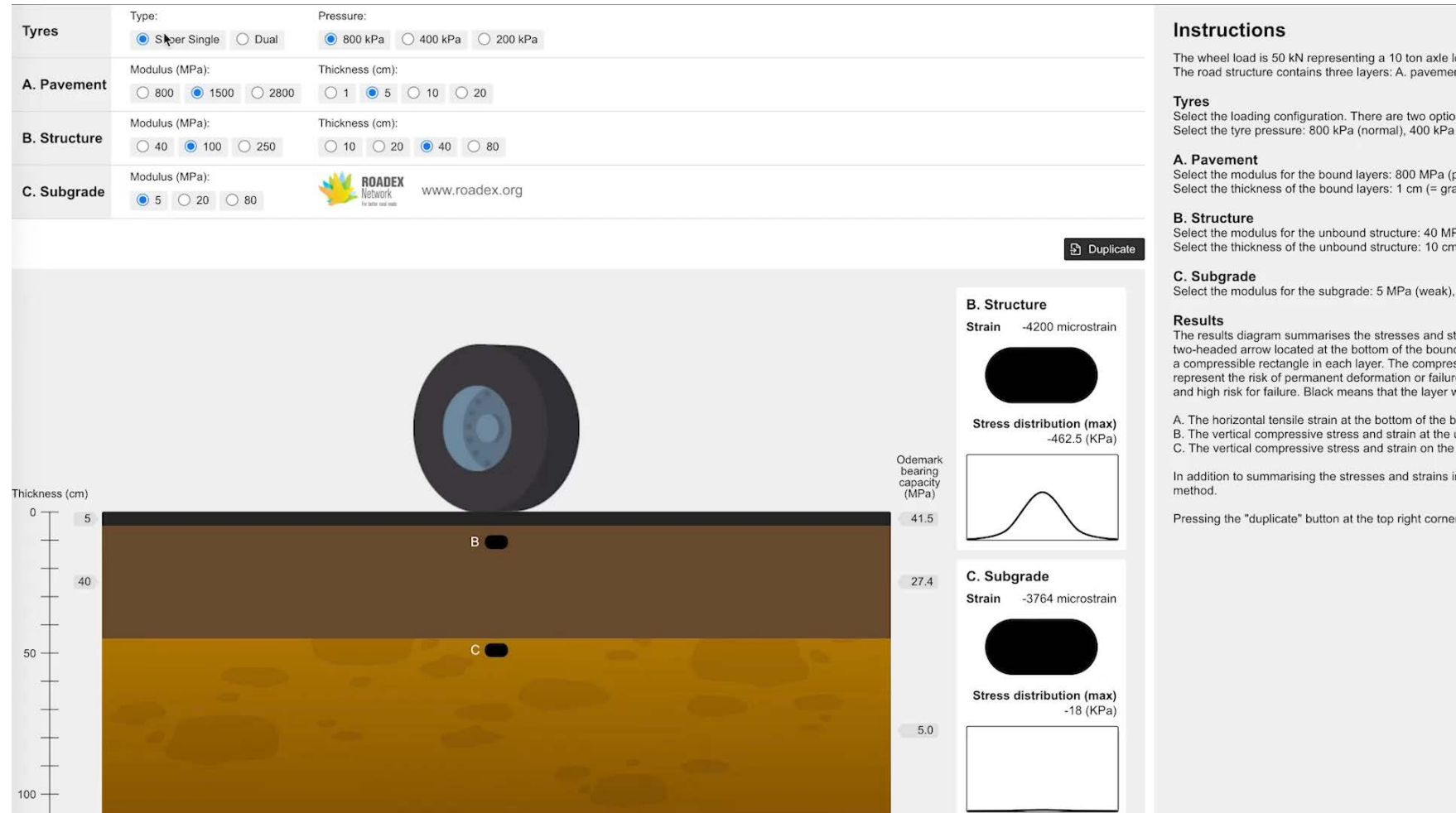
This is a short demo about stresses and strains in road structure at the most critical position for development of permanent deformation

Colors indicating the risk of permanent deformation or failure in the road layer.

Black = will fail
Green = safe

Starting point

Having the super single tyres with pressure of 800

5 cm Pavement layer with 1500 MPa

40 cm of Structure with 100 Mpa
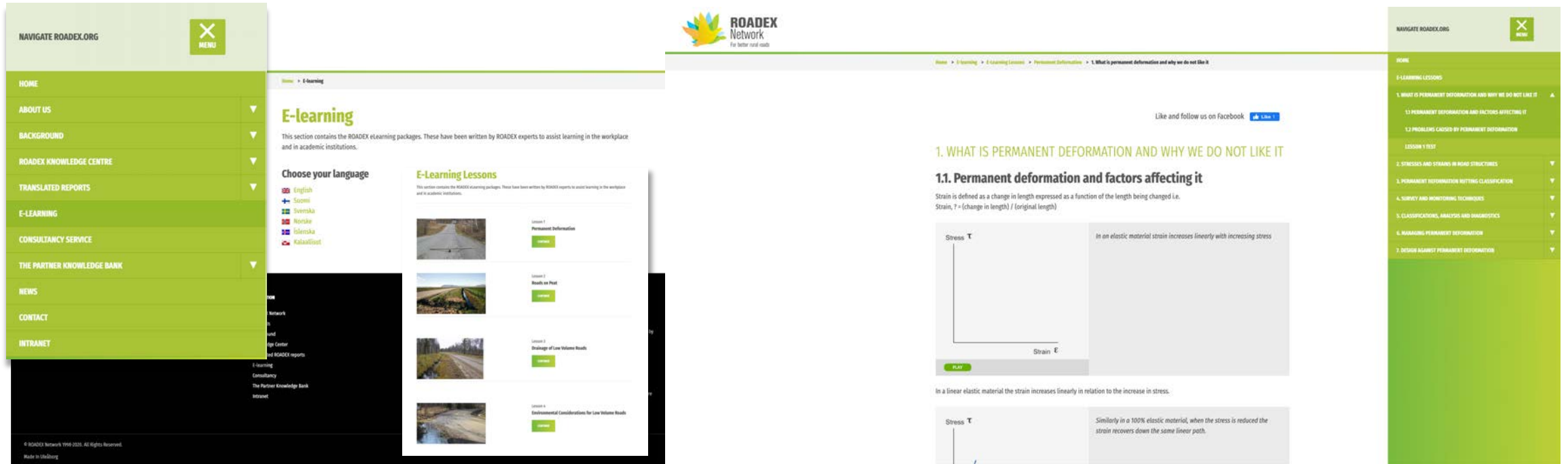
5 Mpa Subgrade

Result:

Change the pavement to 20 cm
= starting to be safe

ROADEX eLearning navigation

www.roadex.org

Some user statistics of eLearning

3 years period June 2017 – June 2020, Google Analytics

- More than 300 000 users world wide
- Average time on the page 2:42 min
- 190 000 of them spending nearly 5 min

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1   38,088
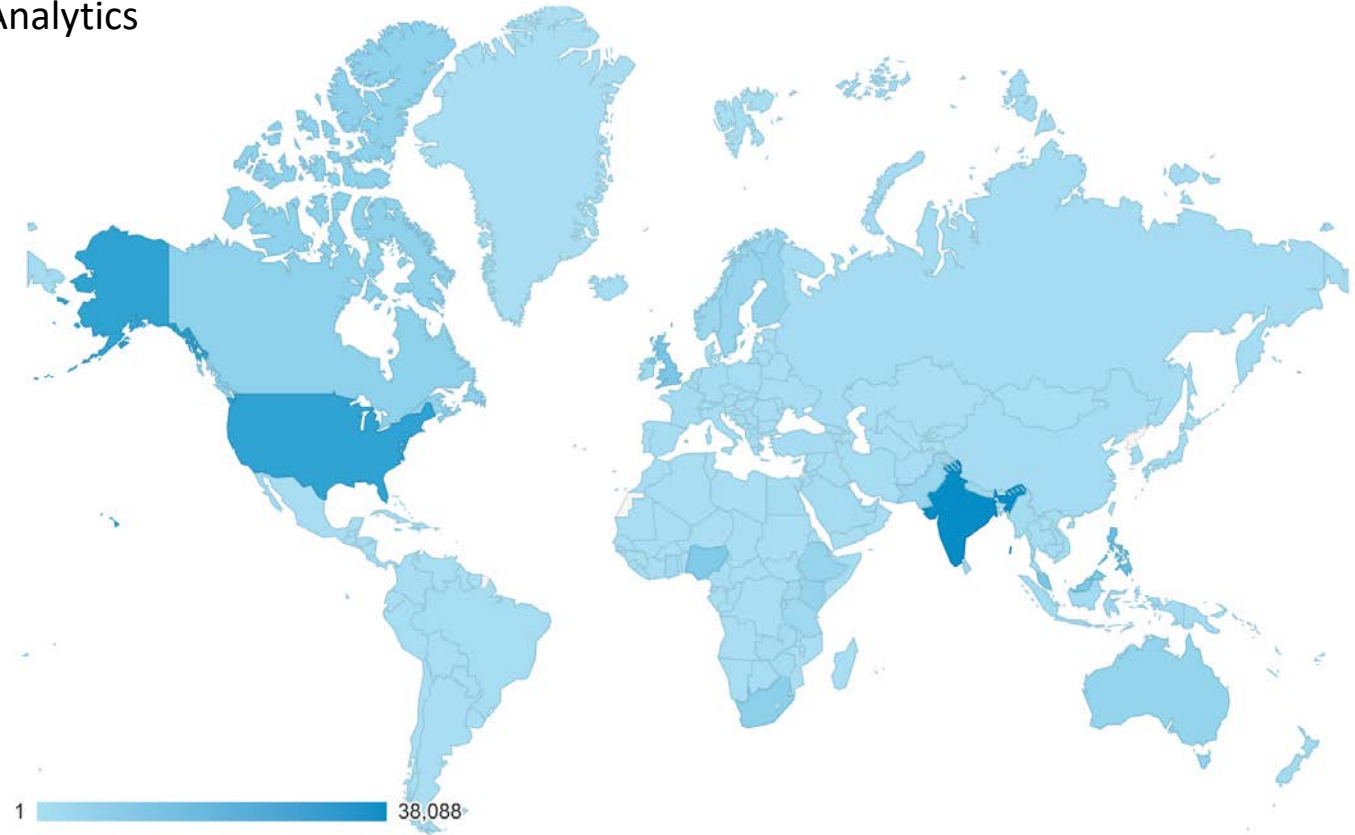
Content drilldown

3 years period June 2017 – June 2020

- eLearning lessons: Drainage of low volume roads, 165 000 views
- eLearning lessons: Environmental considerations, 97 000 views
- eLearning lessons: Permanent deformation, 16 000 views
- eLearning lessons: Roads on peat, 15 000 views

	Page	Pageviews ↓	Unique Pageviews	Avg. Time on Page
		353,853 % of Total: 100.00% (353,853)	300,323 % of Total: 100.00% (300,323)	00:02:42 Avg for View: 00:02:42 (0.00%)
☐ 1.	/e-learning/lessons/drainage-of-low-volume-roads/components-of-road-drainage-system/	97,673 (27.60%)	85,041 (28.32%)	00:04:53
☐ 2.	/e-learning/lessons/drainage-of-low-volume-roads/drainage-problems-and-how-to-avoid-them/	41,270 (11.66%)	36,451 (12.14%)	00:04:26
☐ 3.	/e-learning/lessons/environmental-considerations-for-low-volume-roads/environmental-issues-related-to-road-management/	29,679 (8.39%)	24,982 (8.32%)	00:05:10
☐ 4.	/e-learning/lessons/drainage-of-low-volume-roads/introduction-why-drainage-is-important/	20,458 (5.78%)	17,292 (5.76%)	00:04:45
☐ 5.	/	20,216 (5.71%)	16,490 (5.49%)	00:00:58
☐ 6.	/e-learning/lessons/roads-on-peat/types-of-construction/	15,043 (4.25%)	13,152 (4.38%)	00:03:55
☐ 7.	/e-learning/lessons/permanent-deformation/stresses-and-strains-in-road-structures/	8,861 (2.50%)	7,537 (2.51%)	00:04:15
☐ 8.	/e-learning/lessons/drainage-of-low-volume-roads/water-in-road-materials-and-subgrade-soils-terminology/	7,331 (2.07%)	6,466 (2.15%)	00:03:48
☐ 9.	/e-learning/lessons/permanent-deformation/what-is-permanent-deformation-and-why-we-do-not-like-it/	7,301 (2.06%)	5,990 (1.99%)	00:03:19
☐ 10.	/e-learning/lessons/	5,384 (1.52%)	3,445 (1.15%)	00:00:43

Thank you!

The world is changing.

We need to keep up and adapt but not to forget the good thigs about the past.

ROADEX eLearning, social media and apps will support you on a way there.