

Wrap-up of actions and measures so far to promote NTUA Wind Tunnel

Communication Channels
Progress

Petros Chasapogiannis, NTUA
TWEET-IE Visibility Workshop, Milano, 8th November 2024

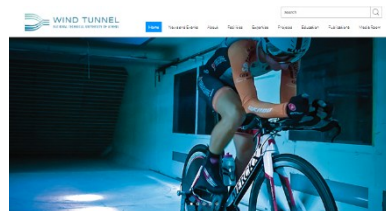
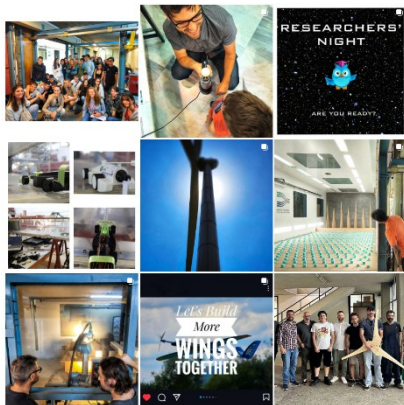


Co-funded by the
European Union

Overview: Communication Tools

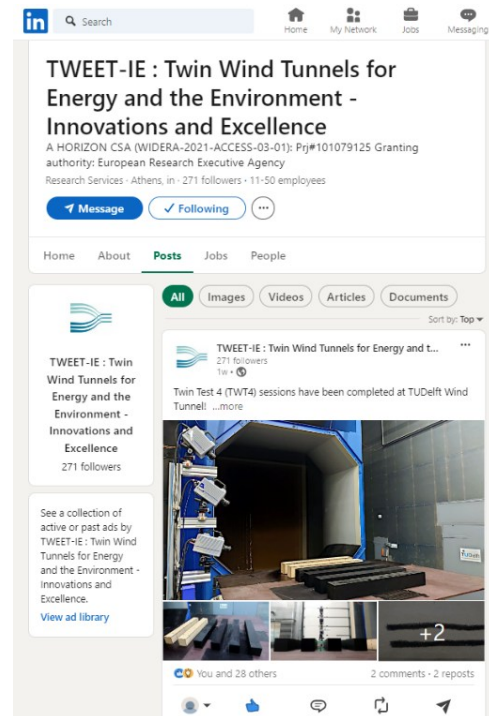
The **visual identity** of a project is a critical component of the overall **communication strategy**, by creating:

- the first impression on its target audience and
- a lasting impact



Welcome
Welcome to the Twin Wind Tunnel Test Bed at National Technical University of Athens, School of Mechanical Engineering, Fluids Section, Laboratory of Aerodynamics

Latest News



Overview: Target Audiences and Communication Channels

Used Channels:

- Webpages
- Social Media
- Public Deliverables
- Press Releases
- Open Days
- Training sessions
- Students Teams
- School visits

Target Group	Examples	Communication Channel
Industry in Greece and Abroad	<ul style="list-style-type: none"> • Wind Turbine Manufacturers • Architectural/Civil Engineering companies • Innovative SMEs • CFD developers 	Webpage and social media; Newsletter; Specialised conferences; Industry events; dedicated workshops; specialised communication channels; Public deliverables
Scientific Community	<ul style="list-style-type: none"> • Aerodynamics, Wind Energy, Wind Engineering, Wind Tunnel testing communities • European Academy of Wind Energy • International Association for Wind Engineering 	Journal publications, conference presentations, webpage, networking events; Public deliverables
Public administrations	Regulatory committees for <ul style="list-style-type: none"> • High-rise buildings • Renewable Energy Applications 	Webpage and social media; Newsletter; Dedicated Events; Public deliverables
Mass media	<ul style="list-style-type: none"> • TV channels • Radio Stations • Newspapers • Webpages 	Webpage and social media; Newsletter; Open Days; Public deliverables
Students	<ul style="list-style-type: none"> • Student Groups, such as Formula Student, EUROAVIA, International Small Wind Turbine Contest • Visiting Students 	Webpage and social media; Training sessions; Group Projects; Diploma Thesis; Doctorate projects; Public deliverables
General Audience		Webpage and social media; Newsletter; Open Days; Public deliverables; Participation in Open Events such as European Research Day, Athens Science Festival etc

Overview: KPIs related to publicity and networking activities

According to the Grant Agreement, the impact of the Dissemination and Communication plan is expected to reach over the project lifetime [M36]:

- **2500** website hits ✓
- 4 technical videos, 2 educational videos and 1 video aimed at the general public ✓
- **250** Instagram (instead of X/Twitter) followers, **250** Facebook followers, **200** LinkedIn followers ✓
- 3 press releases in social media, made at strategic moments of the project

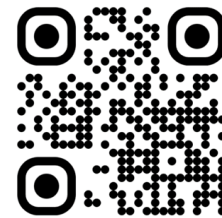
A set of TWEET-IE Project and NTUA Wind Tunnel websites and social media profiles have already been created and their actual 24M impact is presented:

https://www.linkedin.com/company/tweet-ie	(32 posts, 271 followers, 6026 clicks during the past year)
https://www.facebook.com/TweetieProject	(21 posts, 75 followers)
https://www.instagram.com/tweetie.project	(24 posts, 72 followers)
https://www.youtube.com/@tweet-ie_project	(no activity)

https://www.instagram.com/windtunnel.ntua	(23 posts, 246 followers)
https://www.youtube.com/@NTUA.WINDTUNNEL	(1 video)

<http://tweet-ie.eu>

The centralized platform for sharing information about the TWEET-IE project developments & activities.



Target audience: **General Public, Experts**

Pages: **Home**
News & Events
About The Project
Activities
Results
Blind Test
Partners Space



[HOME](#) [NEWS AND EVENTS](#) [ABOUT THE PROJECT](#) [ACTIVITIES](#) [RESULTS](#) [BLIND TEST](#) [PARTNERS](#) [PARTNERS SPACE](#)

Latest News



Twin Test 4 [TWT4] sessions has been completed at TU Delft

21/10/2024

The second and final part of Twin Test 4 (TWT4) sessions has been completed at TU Delft. An investigation of the scale effects on flow in the urban environment is carried out.

[Read More →](#)



Research Assistant Position/Placement in Wind Turbine Wake Aerodynamics

12/09/2024

We are seeking a motivated Research Assistant to join our team on an exciting project focused on wind turbine wake aerodynamics.

[Read More →](#)



Wind Tunnel Summer School visit to a Wind Farm

26/07/2024

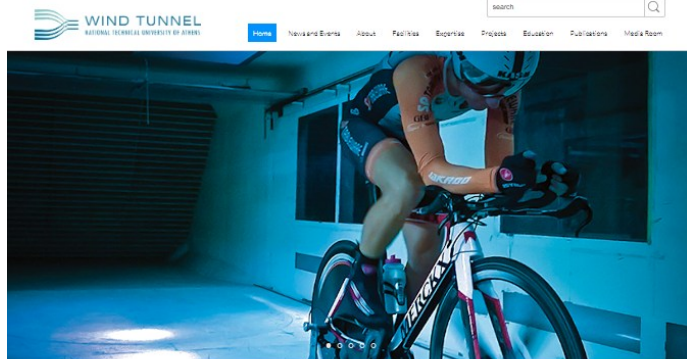
On the final day of the #WindTunnelSummerSchool held at NTUA, our participants had the opportunity to attend a day trip to a wind farm! The students observed operating wind turbines as well as wind turbines being installed.

<http://wt.fluid.mech.ntua.gr>

The centralized platform for sharing information about the
NTUA Wind Tunnel facilities / activities

Target audience: **General Public, Experts**

Pages: **Home**
News and Events
About
Facilities
Expertise
Projects
Education
Publications
Media Room



Welcome

Welcome to the Wind Tunnel facilities at National Technical University of Athens, School of Mechanical Engineering, Fluids Section, Laboratory of Aerodynamical

Latest News



NTUA Wind Tunnel's participation in the European Researchers' Night 2024
02-10-2024
The European Researchers' Night is the largest science outreach event in Europe. NTUA Wind Tunnel participated in the European Researchers' Night 2024 press event that took place at NTUA on Friday 27/9/2024.
[Read More](#)



travelling wind engineer
exploring on digitalisation

The TWEED Project
27/09/2024
Announcing the participation of NTUA at the TWEED (Training Wind Energy Expertise on Digitalisation) MSCA (Marie Skłodowska-Curie Actions) Project

[Read More](#)



Wind Tunnel Summer School visit to a Wind Farm
26/07/2024

On the final day of the Wind Tunnel Summer School held at NTUA, our participants had the opportunity to attend a day trip to a wind farm! The students observed operating wind turbines as well as wind turbines being installed.

[Read More](#)

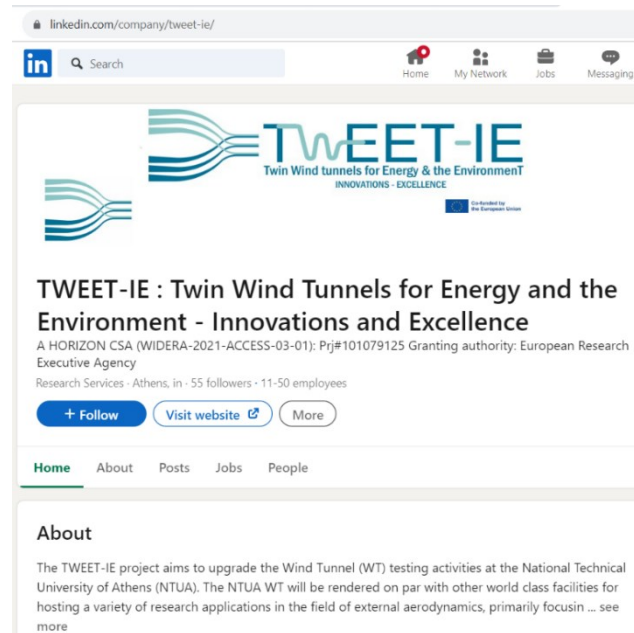
<https://www.linkedin.com/company/tweet-ie/> (271 followers)

Platform for sharing information about the TWEET-IE project developments to the network of collaborators and the experts in the field

Target audience: **Experts, B2B**

There is an increasing interest on the TWEET-IE project activities that follows the increasing of the posts and their contents:

	12M	24M	%
Posts (total)	8	32	+400%
Followers (total)	55	271	+400%



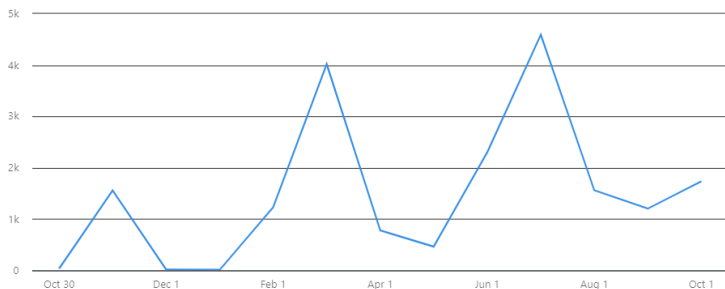
<https://www.linkedin.com/company/tweet-ie/> (271 followers)

Last years' analytics present a constant increase of interest, with variation that follows the projects activities in time

Impressions are the total number of times your content is displayed, no matter if it was clicked or not.

Reach is the total number of people who see your content.

Members reached

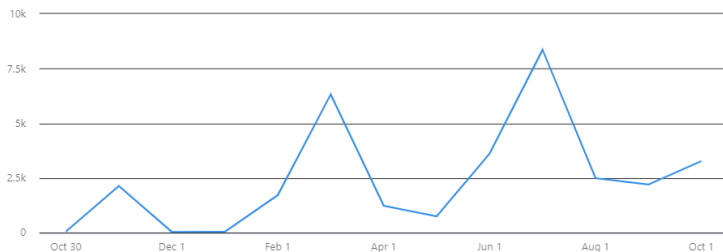


Organic

Members reached: **19509**

19,509

Impressions

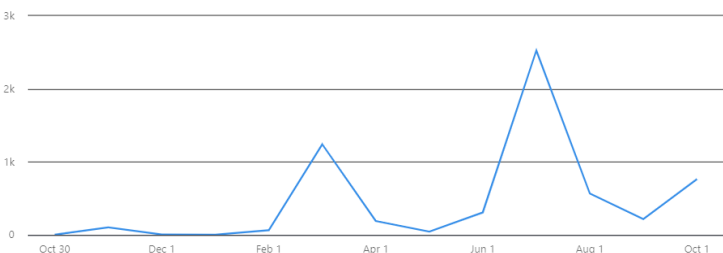


Organic

Impressions: **32160**

32,160

Clicks



Organic

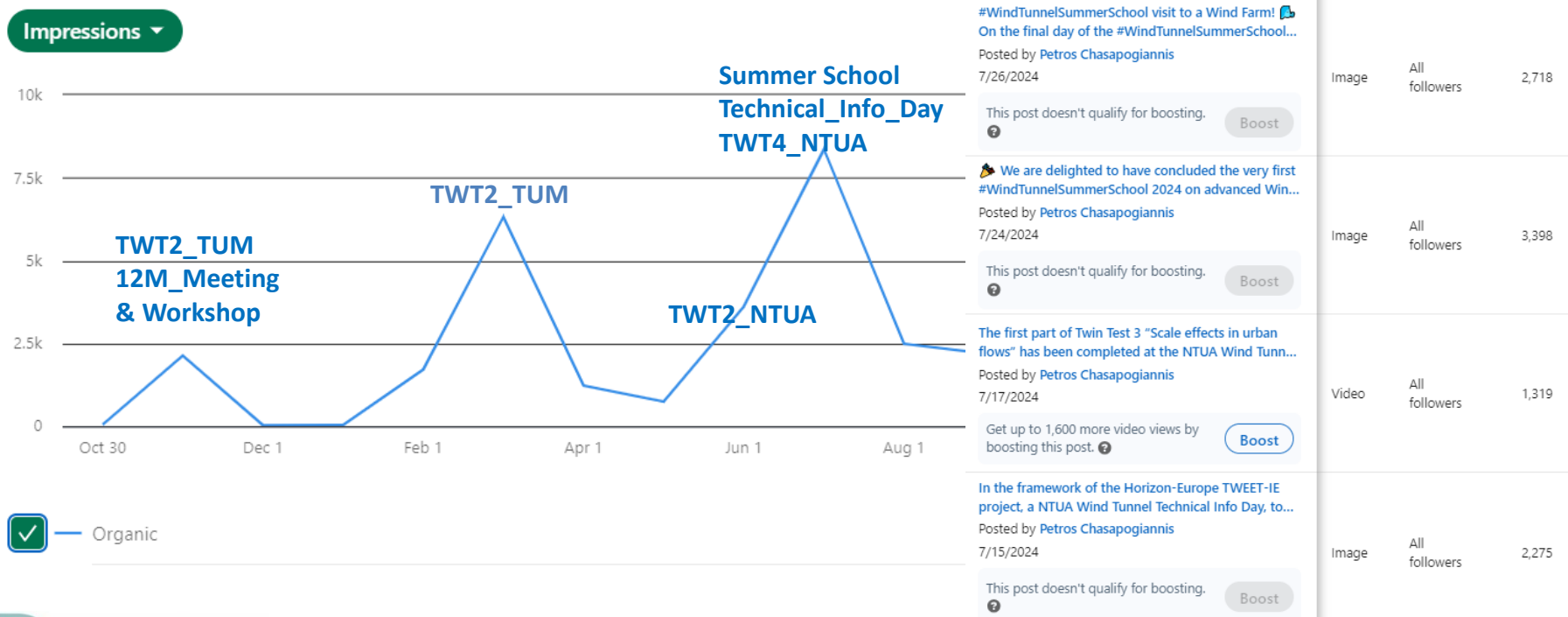
Clicks: **6026**

6,026

<https://www.linkedin.com/company/tweet-ie/> (271 followers)

Project's posts and impressions

Impressions : total number of times your content is displayed, no matter if it was clicked or not.



Impressions: **32160**

<https://www.linkedin.com/company/tweet-ie/> (271 followers)

LinkedIn analytics: Engagement Rate

Engagement rate is a metric used to **measure the level of interaction** that an **audience** has with social media content, including **clicks + likes + comments + shares**.

It is typically expressed as a percentage, and it is calculated as follows:

Engagement Rate = Total Engagement / Total Number of Followers x 100

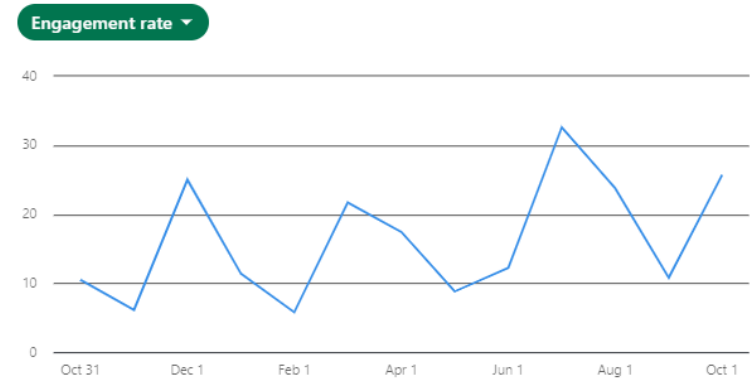
The engagement rate metric measures the success of a post.

High engagement rate: the content is **generating interest**,

Low engagement rate: the content is not as effective in capturing the audience's attention.

“For LinkedIn, an engagement rate of 2% is considered to be good and anything above is great.”

<https://www.linkedin.com/pulse/what-good-engagement-rate-how-calculate-christian-dale/>



✓ Organic

Engagement Rate: **20.9%**

20.9

<https://www.linkedin.com/company/tweet-ie/> (271 followers)

Followers' demographics: Engineers, Researchers ...coming from 35 countries!

Job function ▼

Engineering • 59 (21.7%)

Research • 47 (17.3%)

Education • 45 (16.5%)

Operations • 11 (4%)

Information Technology • 10 (3.7%)

Business Development • 8 (2.9%)

Administrative • 5 (1.8%)

Program and Project Management • 4 (1.5%)

Sales • 4 (1.5%)

Finance • 3 (1.1%)

Industry ▼

Research Services • 62 (22.8%)

Higher Education • 45 (16.5%)

Industrial Machinery Manufacturing • 12 (4.4%)

Aviation and Aerospace Component Manufacturing • 10 (3.7%)

Renewable Energy Equipment Manufacturing • 9 (3.3%)

Civil Engineering • 8 (2.9%)

Oil and Gas • 8 (2.9%)

Wind Electric Power Generation • 7 (2.6%)

Defense and Space Manufacturing • 6 (2.2%)

Engineering Services • 6 (2.2%)

Location ▼

Athens Metropolitan Area, Greece • 76 (27.9%)

The Randstad, Netherlands, Netherlands • 9 (3.3%)

Greater Munich Metropolitan Area, Germany • 7 (2.6%)

Berlin Metropolitan Area, Germany • 6 (2.2%)

Greater Chennai Area, India • 5 (1.8%)

Greater Milan Metropolitan Area, Italy • 5 (1.8%)

Copenhagen Metropolitan Area, Denmark • 4 (1.5%)

Brussels Metropolitan Area, Belgium • 4 (1.5%)

London Area, United Kingdom, United Kingdom • 4 (1.5%)

Cranfield, United Kingdom • 3 (1.1%)



<https://www.facebook.com/TweetieProject/> (74 followers)

The traditional (old fashioned) social media platform for sharing information about the project developments.

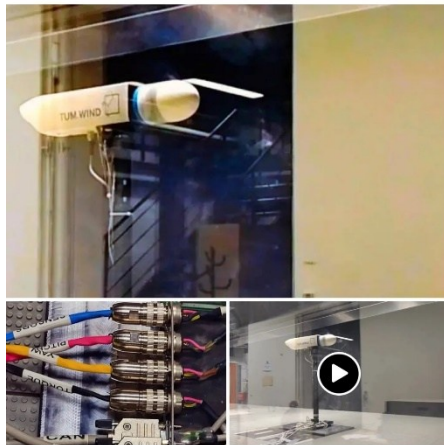
Target audience: **General Public**

LOW INTEREST for Facebook content
(max 4 Likes per post)



Twin Test 2 is in progress at TU Munich wind tunnel.

Performance and flow field measurements... See more



👤 Eri Margioli and 2 others

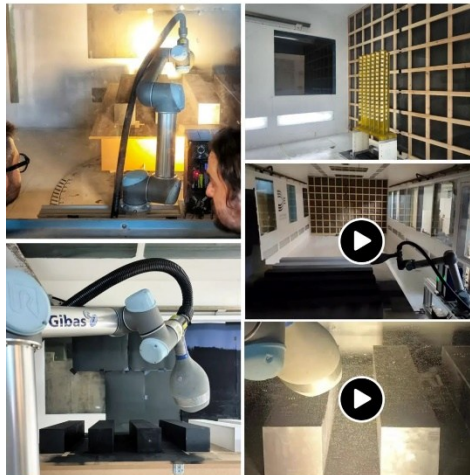
👍 3



Tweetie Project

Jul 18 · 🌐

The first part of Twin Test 4 (TWT4) "Scale effects in urban flows" has been completed at the NTUA Wind Tunnel during past days with the support o... See more



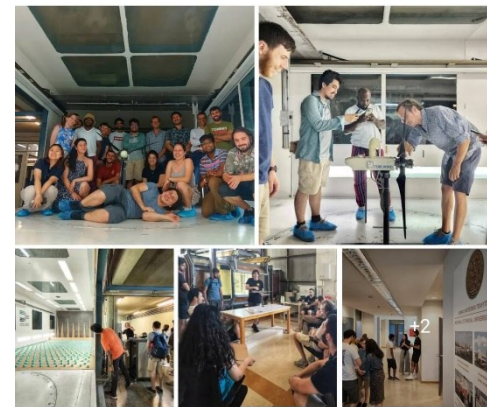
👤 Eri Margioli and 2 others



Tweetie Project

Jul 25 · 🌐

🎉 We are delighted to have concluded the very first [#WindTunnelSummerSchool](#) 2024 on advanced Wind Tunnel Testing for Wind Energy and Urban ... See more



👤 Marinos Manolesos and 3 others

👍 4



🔗 1

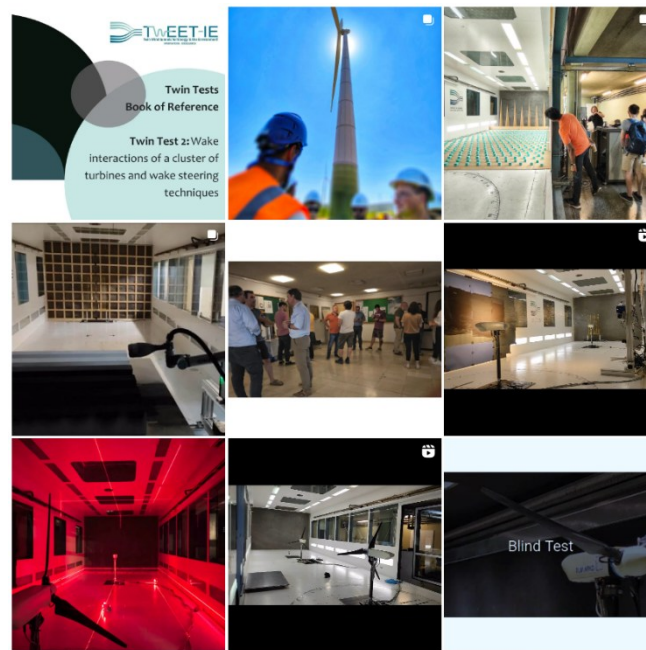
<http://www.instagram.com/tweetie.project/> (72 followers)

An entirely visual platform for sharing information about the project developments with a stronger impact to our audience.

Target audience: **General Public**

There is an increasing interest on the TWEET-IE project activities.

	12M	24M	%
Posts (total)	8	24	+100%
Followers (total)	23	72	+213%



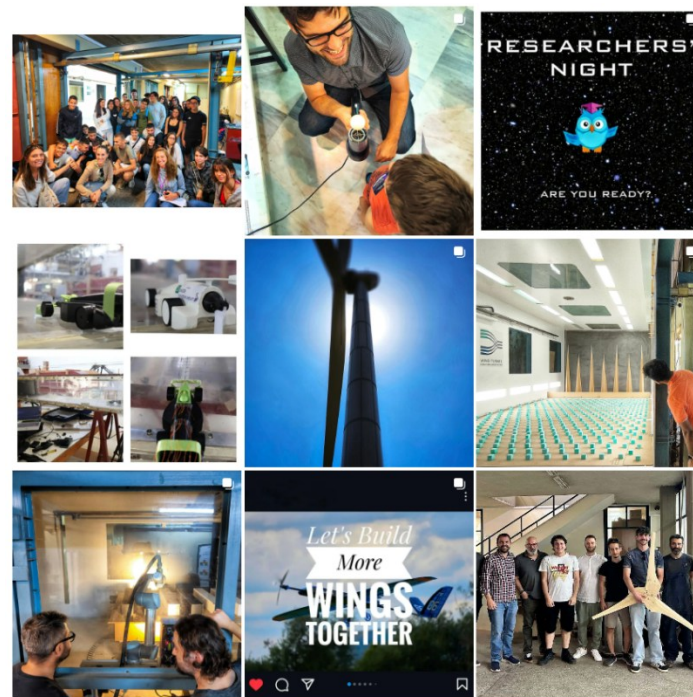
<https://www.instagram.com/windtunnel.ntua/> (247 followers)

A lot of students from all educational levels follow NTUA_WT, especially after the European Researcher's Night events

Target audience: **General Public, Students**

There is an increasing interest on the NTUA WT activities.

	12M	24M	%
Posts (total)	6	23	+183%
Followers (total)	111	247	+123%

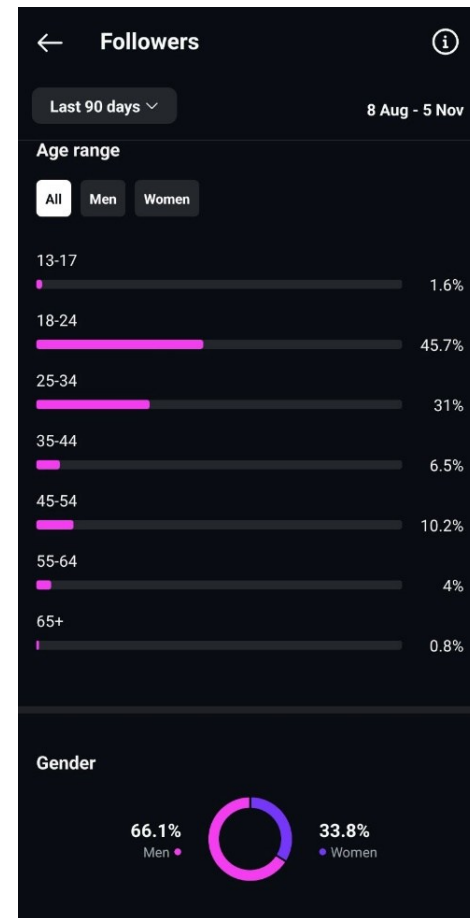


<https://www.instagram.com/windtunnel.ntua/> (247 followers)

Insights (analytics) are not so detailed as the LinkedIn ones and are referred to a period of 3 months max

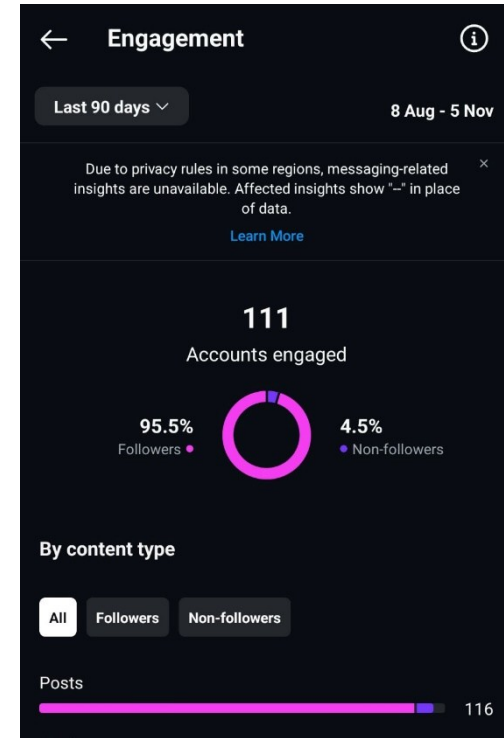
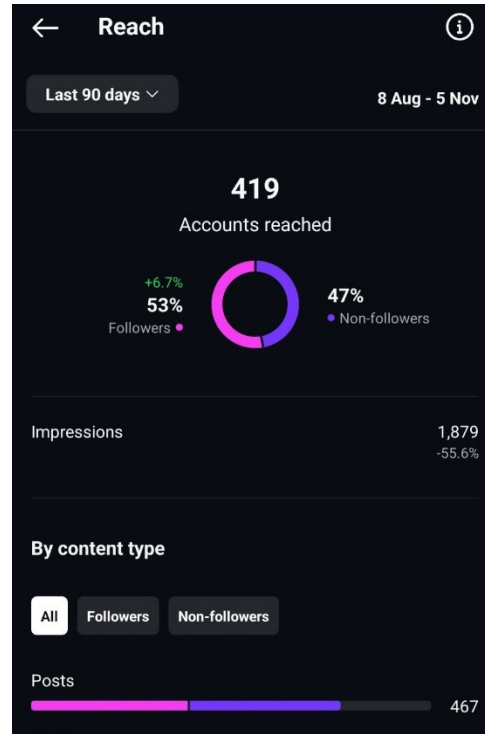
Followers demographics:

A lot of students from all educational levels follow NTUA_WT, especially after the European Researcher's Night events



<https://www.instagram.com/windtunnel.ntua/> (247 followers)

Statistics (insights) for a max period of 3 months



Reached: people accounts that have seen once the content
Engaged: interacted accounts (likes, saves, comments, shares, etc)

<http://tweet-ie.eu/results>

Target audience: **General Public, Experts**

The information about the TWEET-IE progress and NTUA WT status is shared to public via the project's website:

- **Project Deliverables**
- **Project Meetings Proceedings**
- **Books of References**
- **Published Papers**

Project Deliverables

D.1.1 SWOT analysis and definition of KPIs for NTUA WT facility assessment

SENSITIVE

D.1.2 WT facility assessment report (M12)

SENSITIVE

D.2.1 NTUA Wind Tunnel Administration and Management Unit



PUBLIC

Project Meetings Proceedings

TWEET-IE Grand Opening Event Proceedings (24-26/1/2023)

Please expand the Proceedings file, it contains active pdf links that can not be accessed in preview mode.

[Proceedings of the event are available here](#)

Proceedings Administration and Management Workshop (9-10/11/2023)

Please expand the Proceedings file, it contains active pdf links that can not be accessed in preview mode.

[Proceedings to the workshop are available here](#)

Book of References

Twin Test 1: Effects of Vegetation on Flows in the Urban Environment



The present chapter of the book of references refers to the first twin test of the TWEET-IE project, carried out in the wind tunnels of the Karlsruhe Institute of Technology and the National Technical University of Athens.

An investigation of the effects of vegetation on flow in the urban environment is carried out through the study of the flow past a cube shaped building exposed to an atmospheric boundary layer. The building has openings on its side (with respect to the oncoming flow) walls.

Identically shaped buildings were studied in both wind tunnels. The study at KIT was performed with a Laser Doppler Velocimetry (LDV) System and at NTUA with a 2D-3C Particle Image Velocimetry (PIV) system.

The beginning of the report documents details of the measurement methods and practical advice resulting from their application during the experiments at the two different wind tunnels.

Comparison of the two measurements is then presented at the same relative positions around the cube. Furthermore, simulated vegetation was placed on the upstream face and on the roof of the building and its effects were studied, again in both wind tunnels.

Results and analysis of the measurements are presented.

Published Papers

A blind test on wind turbine wake modelling based on wind tunnel experiments: Phase I

Pappa, V., Campagnolo, F., Tamaro, S., Mühle, F., Stegmüller, J., Croce, A., Gromke, C., Riziotis, V., Bottasso, C., Sciacchitano, A., Bouris, D., & Manolesos, M. (2024). A blind test on wind turbine wake modelling based on wind tunnel experiments: Phase I - The benchmark case. Journal of Physics: Conference Series, 2767(9), Article 092053. <https://doi.org/10.1088/1742-6596/2767/9/092053>

Access to scientific data

Target audience: **Experts**

Selected Twin Tests Sessions data and the Blind Test data is shared to public, by the repository service ZENODO, which presents the following [24M] activity:

Data Description	ZENODO link	Views	Downloads
Data Management Plan (DMP)	https://doi.org/10.5281/zenodo.10061048	123	117
Twin Test 1	https://doi.org/10.5281/zenodo.10019001	301	149
Twin Test 2	https://doi.org/10.5281/zenodo.14017240	6	7
Blind Test	https://doi.org/10.5281/zenodo.10566400	409	481

Wind Tunnel NTUA publishes the Annual Report (newsletter)

Publishing the NTUA_WT Annual Report at the beginning of each year, presenting an overview of the facts that happened during the past year.

This Press Release is sent to the NTUA Wind Tunnel mailing list community (**~150 recipients**) and is online available at the Wind Tunnel website.

Target audience: **General Public, Experts**



European Researcher's Night (27/9/2024, NTUA)

Target audience: **General Public, Experts**

Presenting the Wind Tunnel activities and projects to the wide public (especially to students of all educational levels) during the Researcher's Night event at NTUA

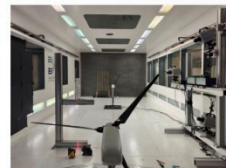


TWEET-IE Project: Wind Turbines Wake Control

The TWEET-IE TWT2 tests focus on wake interactions of a cluster of turbines and wake steering techniques

By implementing various wake control strategies, it is possible to significantly increase the energy production of a wind farm

Twin Tests were performed at TUM and NTUA Wind Tunnels



TWEET-IE Project: Scale Effects In Urban Flows

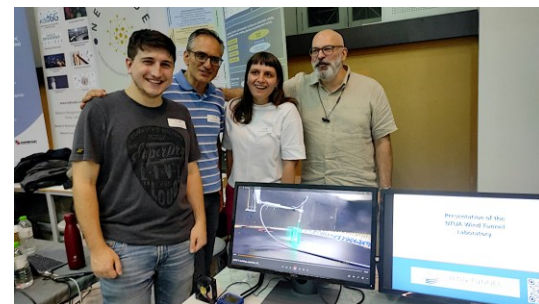
The TWEET-IE TWT4 tests focus on scale effects in urban flows

The flow in an urban street canyon is studied

Tests were performed at NTUA Wind Tunnel and right now are in progress at TUDelft



European Researcher's Night (29/9/2023, NTUA)



Wind Tunnel Info Day (26/6/2024, NTUA)

Target audience: **B2B Experts**

Metaloumin
HELLENIQ Energy
Hellenic Cycling Association
Hellenic Energy Competence Center
International Wind Engineering
iWind Renewables SA
Eunice Energy Group

The NTUA Wind Tunnel capacity for research and services was presented, during a special Info Day event dedicated to B2B Experts.

Past and present case studies, related to **aerodynamics**, **wind energy**, **environmental flows** and **buildings applications**, was presented.

In addition, a tour of NTUA Wind Tunnel facilities gave us the opportunity to demonstrate the wind tunnel testing facility.



Wind Tunnel Info Day (26/6/2024, NTUA)

We registered participations from the **energy, construction** and **sports** sector:

- Leading energy group in Southeast Europe (**Helleniq Energy**)
- Renewable energy group (**Eunice Energy Group**)
- Company Group of research institutions and businesses in Greece (**Hellenic Energy Competence Center**)
- Wind energy technology consulting company (**iWIND Renewables SA**)
- Wind energy technology and engineering consulting company (**International Wind Engineering**)
- Construction company, Architectural profiles & PV mounting (**Metaloumin**)
- Sports (**Hellenic Cycling Association**)

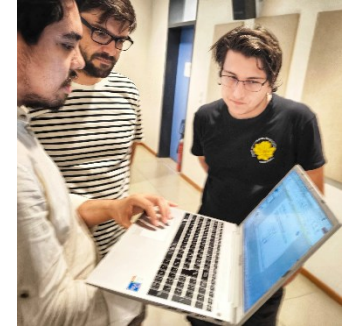
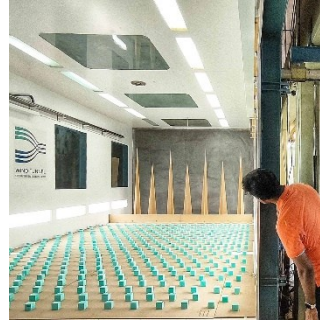
Metaloumin
HELLENIQ Energy
Hellenic Cycling Association
Hellenic Energy Competence Center
International Wind Engineering
iWind Renewables SA
Eunice Energy Group

Wind Tunnel Summer School (15-19/7/2024, NTUA)

Target audience: **Students, Experts**

The first Wind Tunnel Summer School 2024 on advanced Wind Tunnel Testing for Wind Energy and Urban Flows was held at NTUA during 15-19 July with the participation of **14 students**.

The interest for the participation was great, with **51 students'** submissions from **13 different countries' universities**.

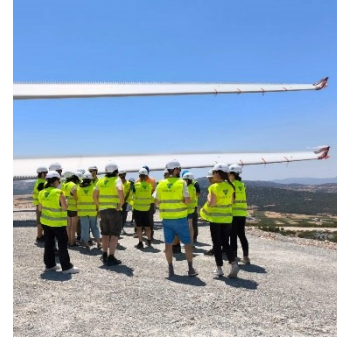


Wind Farm Visit (19/7/2024, NTUA)

Target audience:
Students, Experts

We scheduled a Wind Farm visit at the last day of the Summer School.

Thanks to **iSolar SA** and **ENERCON** support, it was possible to showcase their innovative wind turbines and to share their expertise.



EUREC: European Master in Renewable Energy (Wind Specialization)

Target audience: **Students, Experts**

A wooden 1.2m diameter small wind turbine rotor is designed, manufactured and evaluated by students of the EUREC Master, during their Wind Energy specialization at the NTUA using only hand tools.



Students Teams Participating in International Contests

Target audience: **Students**

- AIOLOS_NTUA
- EUROAVIA_ATHENS
- PROM_RACING



School visits at NTUA Wind Tunnel

Target audience: **High School Students**

Number of high school visits in the period 2022-2024: 3+6



Supporting High School Students in the F1 School Competition

Target audience:
High School Students

They were informed about our activities, during the Researchers' Night event, and they asked us kindly for our support to measure their F1s performance!

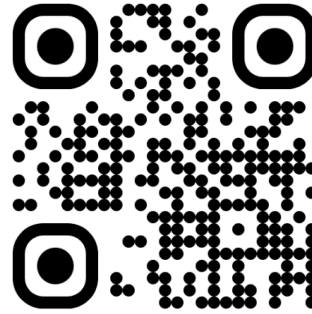


**Thank you
for your attention !!!**



TWEET-IE Project

Follow us on your
favorite platform...

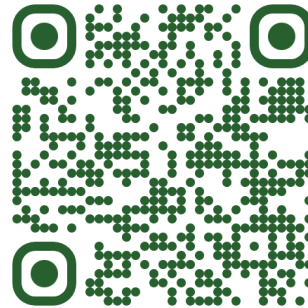


TWEET-IE @web



TWEET-IE @LinkedIn

...stay tuned with
our latest news!



TWEET-IE @Facebook



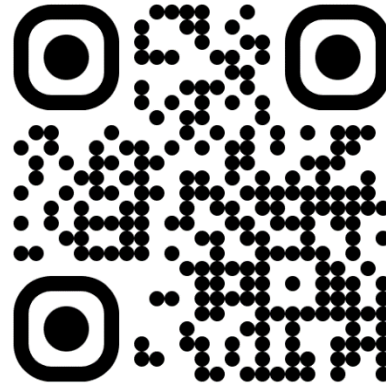
TWEET-IE @Instagram

Promote the TWEET-IE project to a wider audience

Without a special promotion policy, we reached a satisfactory number of followers.

It is essential for the project to reach a larger audience.

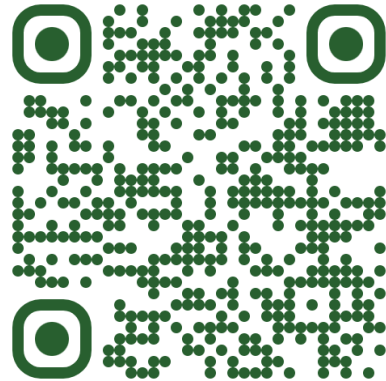
Promote TWEET-IE in your organization using our social media QR-codes!



TWEET-IE @web



TWEET-IE @LinkedIn



TWEET-IE @Facebook



TWEET-IE @Instagram

School of Mechanical Engineering, NTUA (30-31/1/2025)



The School of Mechanical Engineering has planned an **Open Days event on the 30th & 31st of January 2025**, when all laboratories of the School will be open for school visits.

Wind Tunnel will participate at this event and the recent activities and projects will be presented.

In addition, a tour of NTUA Wind Tunnel facilities is scheduled in order to demonstrate the wind tunnel testing facility.

Target Audiences and Communication Channels

Used Channels:

- **Webpages**
- Social Media
- Public Deliverables
- Press Releases
- Open Days
- Training sessions
- Students Teams
- School visits

Target Group:

- **Webpages**
- Social Media
- Public Deliverables
- Press Releases
- Open Days
- Training sessions
- Students Teams
- School visits

Target Group	Examples	Communication Channels
Industry in Greece and Abroad	<ul style="list-style-type: none"> • Wind Turbine Manufacturers • Architectural/Civil Engineering companies • Innovative SMEs • CFD developers 	Webpages Specialised events; dedicated specialised Public deliverables
Scientific Community	<ul style="list-style-type: none"> • Aerodynamics, Wind Energy, Wind Engineering, Wind Tunnel testing communities • European Academy of Wind Energy • International Association for Wind Engineering 	Journal presentations; Publications
Public administrations	Regulatory committees for <ul style="list-style-type: none"> • High-rise buildings • Renewable Energy Applications 	Webpages Dedicated events
Mass media	<ul style="list-style-type: none"> • TV channels • Radio Stations • Newspapers • Webpages 	Webpages Open Days
Students	<ul style="list-style-type: none"> • Student Groups, such as Formula Student, EUROAVIA, International Small Wind Turbine Contest • Visiting Students 	Webpages sessions; Thesis; deliverables
General Audience		Webpages Open Days Participatory European Festival etc

Overview: KPIs related to publicity and networking activities



WP1. Deliverable 1.1

KPIs related to publicity and networking activities			
Num.	Description	Monitoring every	Target
1	number of questionnaires addressed to target groups	1 year	1-2
2	number of undertaken networking activities related to the WT	1 year	1-2
3	number of new international collaborations	1 year	1-2
4	number of school visits to the wind tunnel	1 year	5-10
5	number of target group visits (companies/collaborators/colleagues from other universities) to the wind tunnel	1 year	5-10
6	number of followers on social media	1 year	+20-50 (after 1 st year)
7	number of publicity statements/announcements (social media announcements)/annual newsletters released	1 year	5-10



WP1. Deliverable 1.2

KPIs related to publicity and networking activities			
Num.	Description		Monitoring every
1	number of questionnaires addressed to target groups	0	1 year
2	number of undertaken networking activities related to the WT	4	1 year
3	number of new international collaborations	3	1 year
4	number of school visits to the wind tunnel	3	1 year
5	number of target group visits (companies/collaborators/colleagues from other universities) to the wind tunnel	8	1 year
6	number of followers on social media	250	1 year
7	number of publicity statements/announcements (social media announcements)/annual newsletters released	35	1 year

A set of TWEET-IE Project and NTUA Wind Tunnel websites and social media profiles have already been created and their actual recent 12M (regarding the second year) impact is presented:

<https://www.linkedin.com/company/tweet-ie>
<https://www.facebook.com/TweetieProject>
<https://www.instagram.com/tweetie.project>
<https://www.instagram.com/windtunnel.ntua>

(32 posts, 271 followers, 6026 clicks during the past year)
 (21 posts, 75 followers)
 (24 posts, 72 followers)
 (23 posts, 246 followers)