



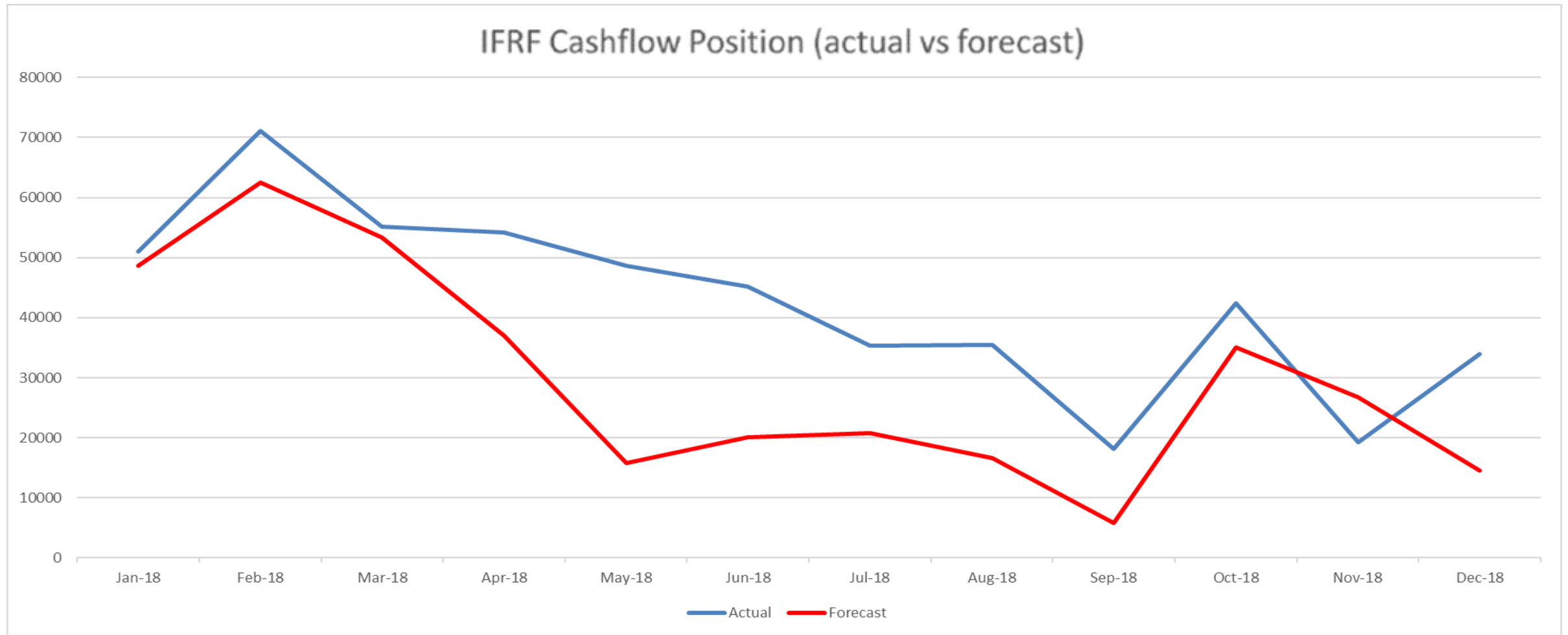
# IFRF Quarterly Progress Report (QPR) – Q4 2018

1. Finance
2. Membership
3. Communications
4. National Committee update
5. TOTeM45 event
6. Future TOTeMs
7. Other meetings attended by IFRF
8. New website and CRM database
9. Marketing
10. Member and general enquiries
11. Industrial Combustion Journal
12. 70<sup>th</sup> anniversary
13. IFRF Ltd matters
14. Other activities





## IFRF QPR Q4: 1. Finance – forecast and financial plans



- CF exceptional contribution and CF 2018 membership received in October/November respectively
- AFRC 2019 membership fees received in December 2018
- CI 2018 membership received in January 2019

## IFRF QPR Q4: 2. Membership

### 120 member organisations

- 3 down from Q3 2018
- Same as Q4 2017

#### Includes:

- Large industry = 47
- Small industry = 28
- Academia = 45

### 9 individual members

- 4 up from Q3 2018
- 3 up from Q4 2017



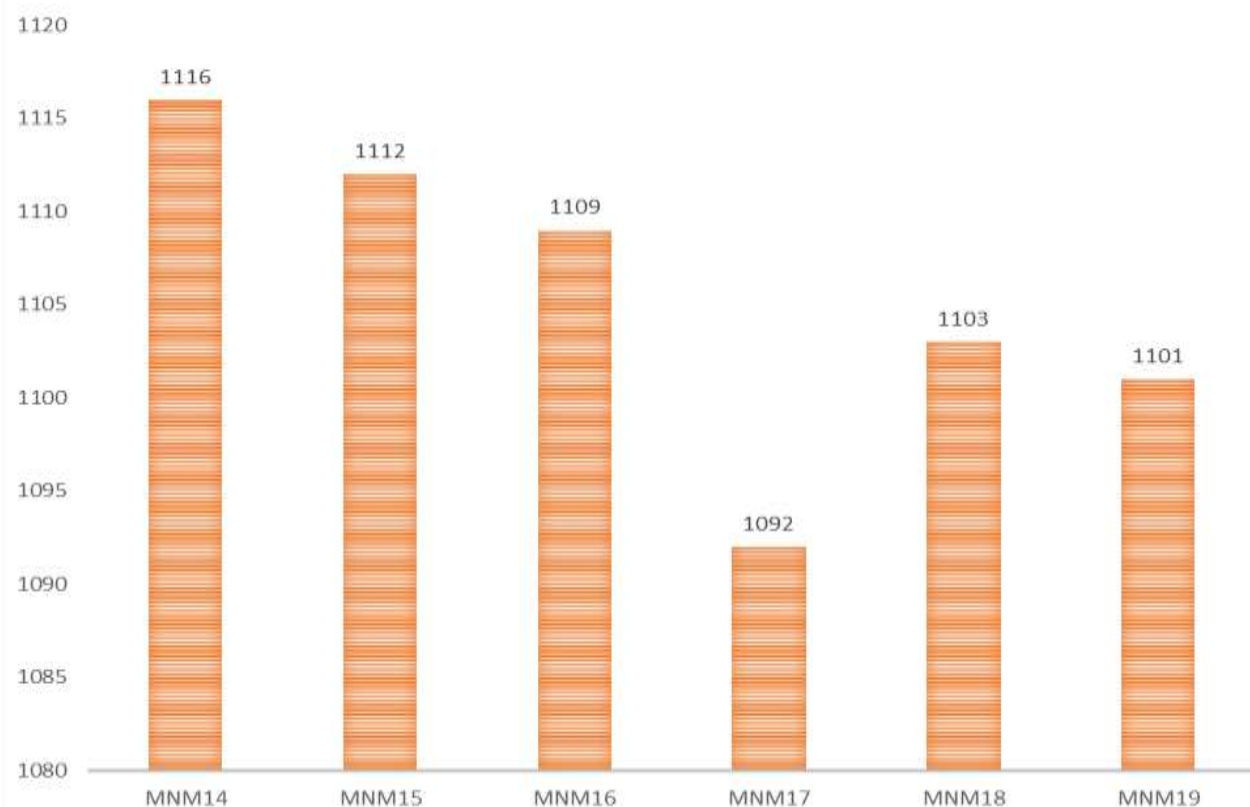
KPI for end of 2019 = 130 member organisations

# IFRF QPR Q4: 3. Communication

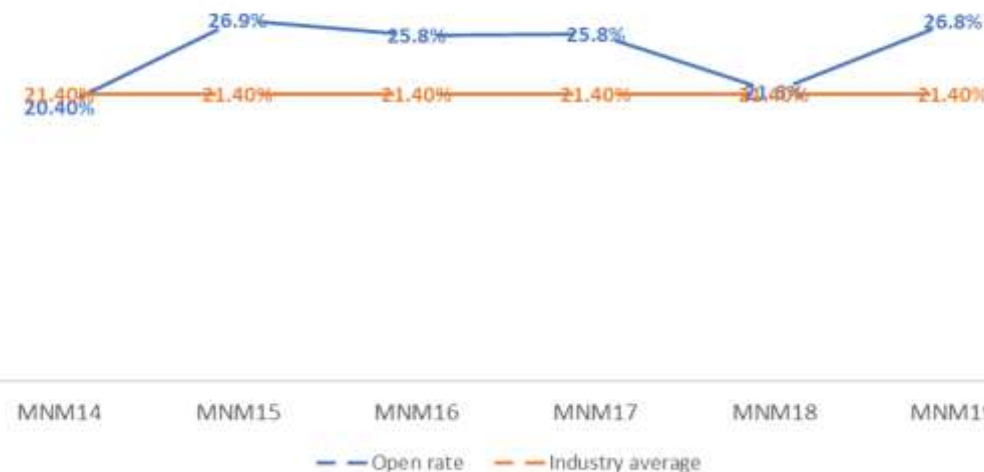
## MNM - Monday Night Mail (1/2)

6 MNMs published in Q3

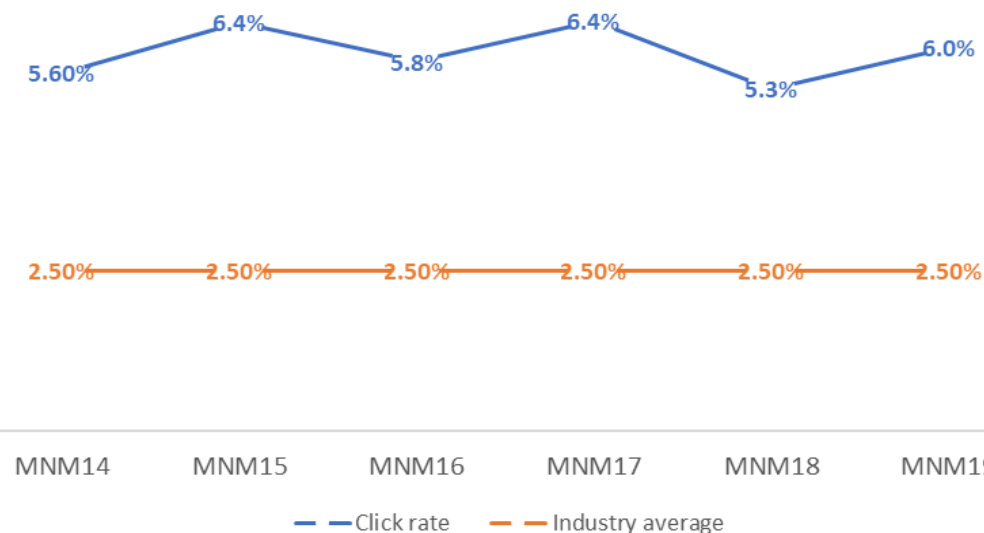
### SUCCESSFUL DELIVERIES



### OPENS



### CLICKS





## MNM - Monday Night Mail (2/2)

Issue	1 <sup>st</sup> Most read article	2 <sup>nd</sup> Most read article	3 <sup>rd</sup> Most read article
MNM14	Annual Report 2017	IFRF 2018 Presentations	TOTeM45 programme outline
MNM15	Reigniting the... late-1970s to mid-1980s	RJM grows in-house team	IFRF in Dunkirk: French Flame's General Assembly
MNM16	IFRF in China	Austrians and Dutch working on hydrogen facility for steelmaking	Fall in global flaring driven by Russia
MNM17	Reigniting the... 1970s	America First Energy Conference emits views that climate change is a lot of hot air	TOTeM45 programme
MNM18	Some GT OEMs struggling despite growth in gas-fired power generation	TOTeM45 programme	EC Horizon 2020 update
MNM19	Reigniting the... late-1960s	Successful TOTeM on 'Gas turbines for future energy systems'	MIT research finds "firm" low carbon sources vital to affordably reduce power sector emissions to zero



## Social media (1/5)



Jul 2018 • 31 days

### TWEET HIGHLIGHTS

**Top Tweet** earned 1,070 impressions

Session 2 will look at **#GasTurbines** for flexible power (operational flexibility, fuels flexibility). And we've got Dave Abbott **@uniper\_energy** plus **@AimeeMorgans** and Prof Yannis Hardalupas from **@imperialcollege** **#TOTeM45**  
[pic.twitter.com/Levz9LVIFW](https://pic.twitter.com/Levz9LVIFW)

Tweets  
93

Tweet impressions  
14.3K

Profile visits  
309

Mentions  
1

New followers  
13

Followers: 208

Aug 2018 • 31 days

### TWEET HIGHLIGHTS

**Top Tweet** earned 2,015 impressions

A new report by ClearPath and the Carbon Utilisation Research Council estimates that some carbon capture, utilisation and storage installations in the USA could be profitable. More at [bit.ly/2P5ot5N](https://bit.ly/2P5ot5N)

🔗 2 ❤️ 1

Tweets  
52

Tweet impressions  
13K

Profile visits  
184

Mentions  
5

New followers  
5

Followers: 216

Sep 2018 • 30 days

### TWEET HIGHLIGHTS

**Top Tweet** earned 1,025 impressions

Dr Colin Copeland of University of **@BathMechEng** builds on theme of AM. Key change of philosophy needed - almost complete design freedom on offer but need to also do things in a different way. Nice examples re GTs. Collaboration with **@HiETA Tech** - 'CHARM Project'. **#TOTeM45** [pic.twitter.com/vWA052W1is](https://pic.twitter.com/vWA052W1is)

Tweets  
62

Tweet impressions  
29.6K

Profile visits  
432

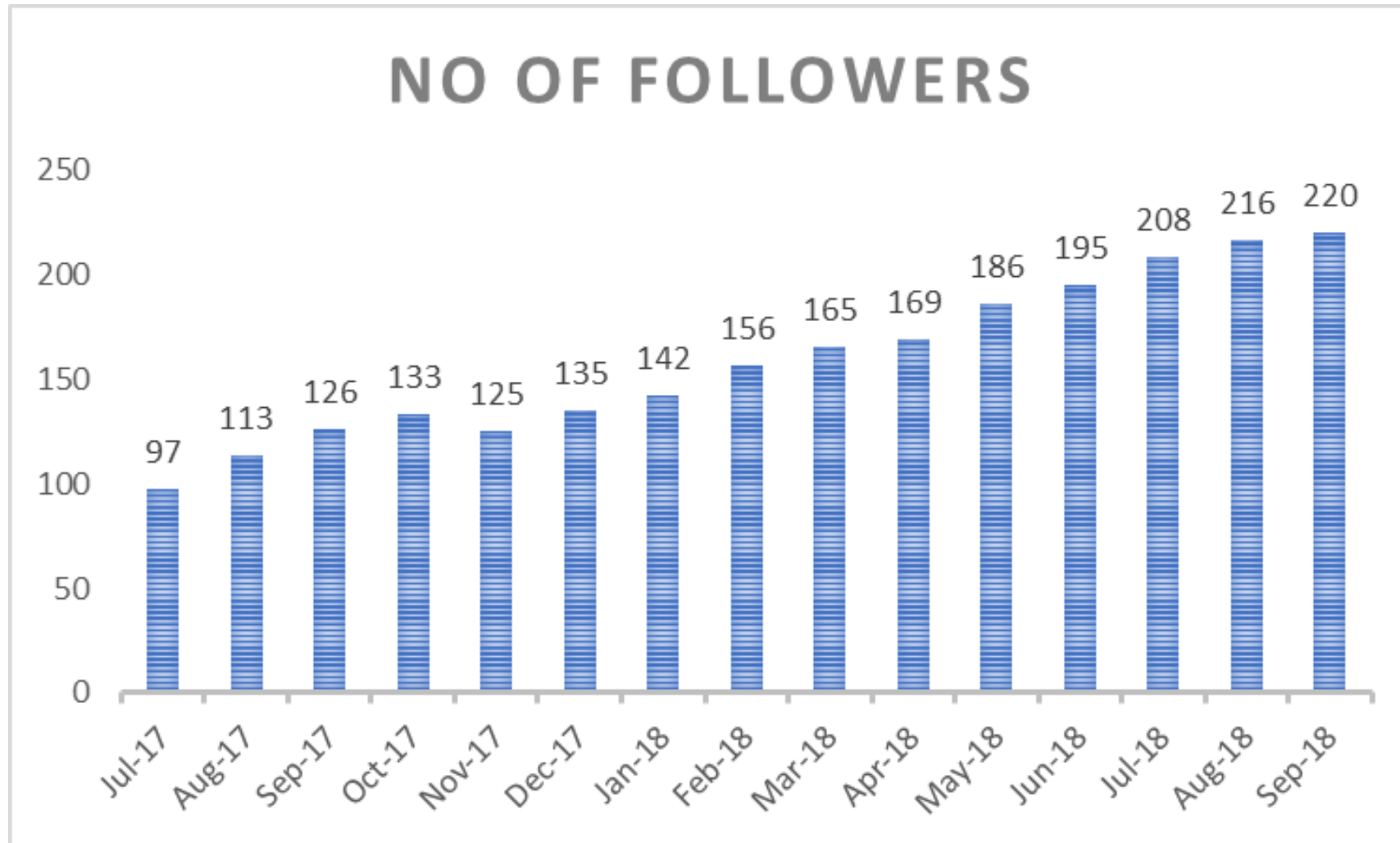
Mentions  
4

New followers  
7

Followers: 220

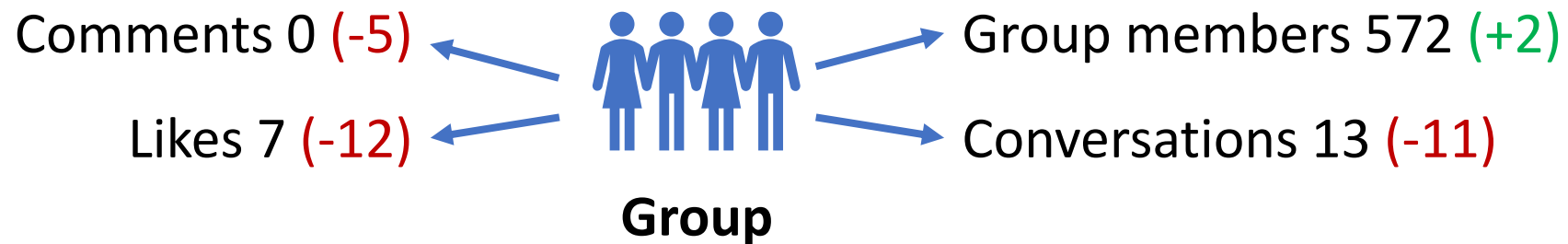


## Social media (2/5)





## Social media (3/5)







## Social media (4/5)

- 8 Subscribers (+7)
- 58 Views (-87)
- 78 Total watch time\* - minutes (-339)
- 163 Impressions (+137)
- 16.6% Impressions click-through-rate^ (+8.9)
- 1:20 Average watch time - minutes (-1:32)

\*total amount of time IFRF videos were watched

^Percentage of users who clicked to view after seeing IFRF videos on their timeline





## IFRF QPR Q3: 3. Communications

Paper 3

### Social media (5/5)

- WeChat - the social media platform used in China
- WeChat group established – Chinese Flame Research Committee
  - 15 members
- 7 'Moments' shared
  - 15 likes
  - 2 comments
- 19 contacts made





## IFRF QPR Q3: 4. National Committees update

Paper 3

### AFRC

- Symposium held in September in Salt Lake City
- Reviewing LLM documents

### CI

- Organisation formally approved
- Meeting held 5<sup>th</sup> October 2018

### NVV

- Preparations for COMBURA Symposium
- Wrote to King of Netherlands regarding #IFRFAt70

### BFRC

- Membership fees paid
- Board meeting delayed

### DVV

- General meeting will be 15<sup>th</sup> November 2018

### SFRC

- Reviewing LLM documents
- Next meeting 8<sup>th</sup> November 2018

### CF

- 2018 Membership fees due in Q4
- Next meeting 29<sup>th</sup> November

### FFRC

- Finnish Flame Day to be held 23<sup>rd</sup> October 2018

### AMG

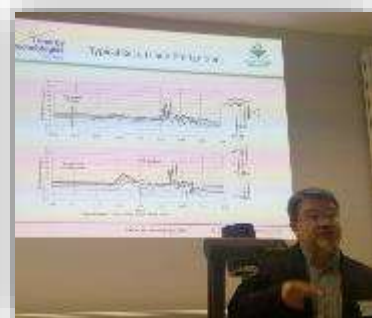
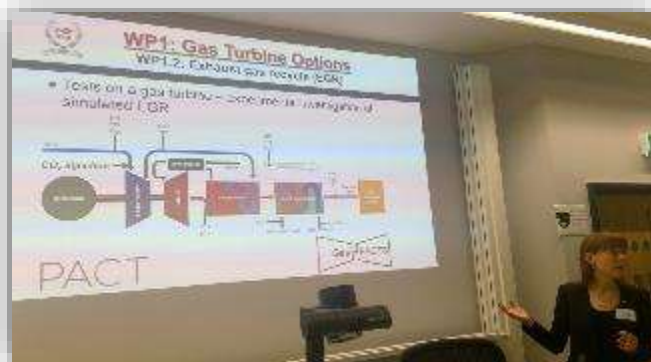
- PS to visit China to establish the Chinese Flame Research Foundation in January 2019





# IFRF QPR Q3: 5. TOTeM45 event (1/3)

Paper 3



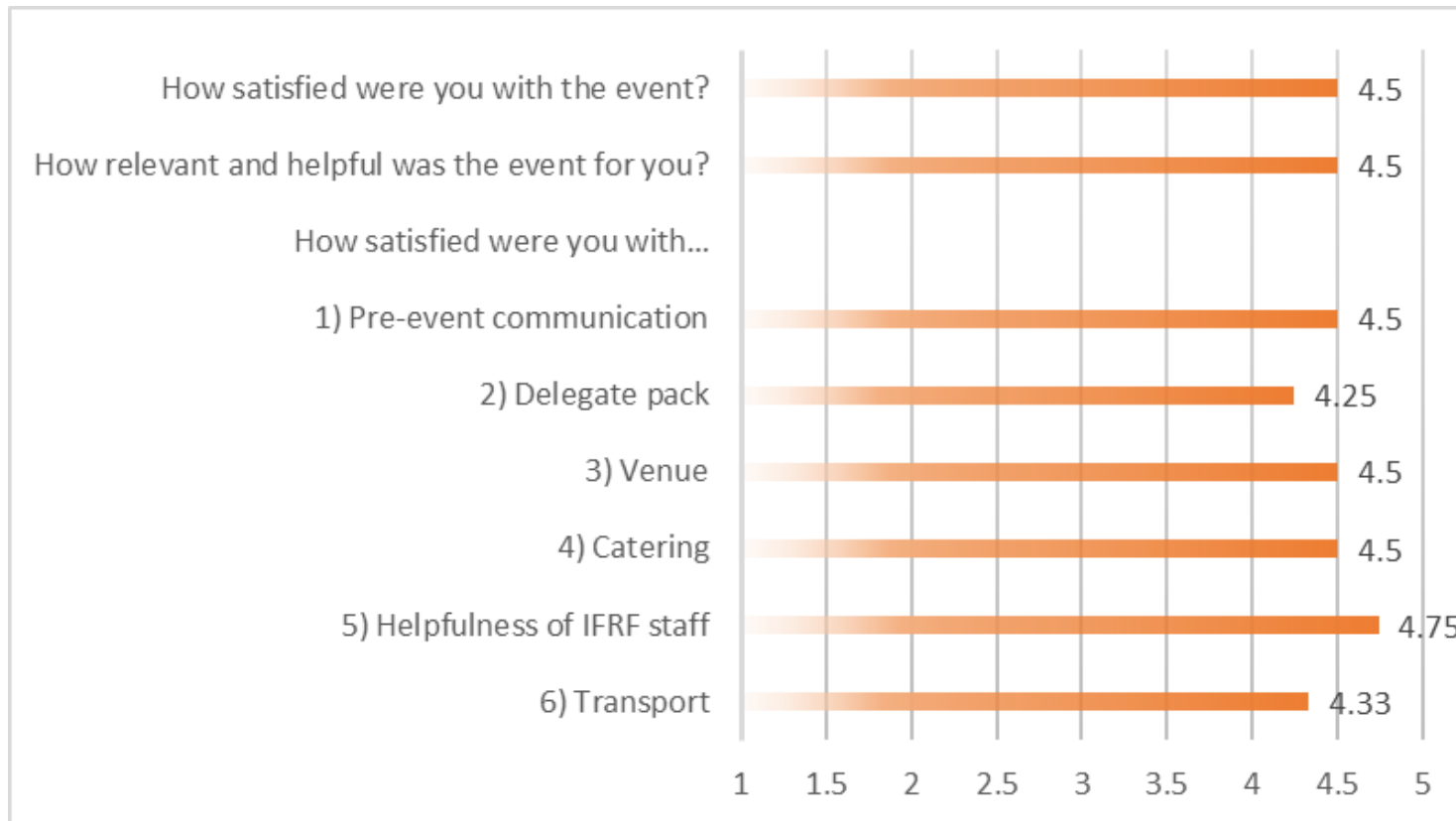


## IFRF QPR Q3: 5. TOTeM45 event (2/3)

Paper 3

- 31 attendees from 4 countries – 20 of these are IFRF members
- 4 feedback forms submitted - 13% conversion rate

5 = excellent, 1 = poor



### Feedback from delegates:

*"Such dedicated events in specific areas are very helpful"*

**Yannis Hardalupas,**  
**Imperial College London**

*"This event generated a large number of opportunities together"*

**Rob Bastiaans, TU Eindhoven**



## IFRF QPR Q3: 5. TOTeM45 event (3/3)

Paper 3

### Expenditure

Category	Original budget	Actual	Variance	Comments
Dinner	£2,500.00	£1,441.50	£1,058.50	
Marketing	£1,000.00	-	-	No printing costs incurred due to error by the printers
Miscellaneous	£1,000.00	-	£1,000.00	
Travel and subsistence	£500.00	£426.52	£73.48	
Transport	£500.00	£275.00	£225.00	
Venue	£2,000.00	£1,483.00	£517.00	
<b>Total</b>	<b>£7,500.00</b>	<b>£3,626.02</b>	<b>£3,873.98</b>	

### Income

Revenue stream	Amount
Sponsorship	£2,137.50
Ticket revenue	£5,991.19
<b>Total revenue</b>	<b>£8,128.69</b>

### Income vs expenditure

	Amount
Total revenue	£8,128.69
Expenditure	£3,626.02
<b>Profit / loss of event</b>	<b>£4,502.67</b>





## Potential future TOTeM topics for 2019:

- **Scaling of R&D rigs**
  - Topic generated from Nordic Flame Day 2017
- **AFRC and APIs work on standards for process heaters and flares**
  - Topic generated from AFRC Symposium 2017
  - People keen on TOTeM outside of Europe
- **Hydrogen and ammonia as energy vectors – impact on combustion**
  - Topic generated from TOTeM45
- **Energy-from-Waste (thermal processes, advanced thermal processes & biological processes relevant to IFRF)**
  - Topic generated from MNM series on EfW

**\*\*TOTeM topics required for 2019  
from National Committees\*\***





## IFRF QPR Q3: 7. Other meetings attended by IFRF (1/2)

Paper 3

- Regular meetings with ESP regarding website development (Sheffield, UK)
- Meeting with Yong Yan to plan IFRF's visit to China (London, UK)
- Strategy meeting with Mohamed Pourkashanian (Sheffield, UK)
- Meeting with HSL regarding potential training opportunities (Buxton, UK)
- Meeting with Prof Phil Bowen, Cardiff University regarding PRP and training (Cardiff, UK)





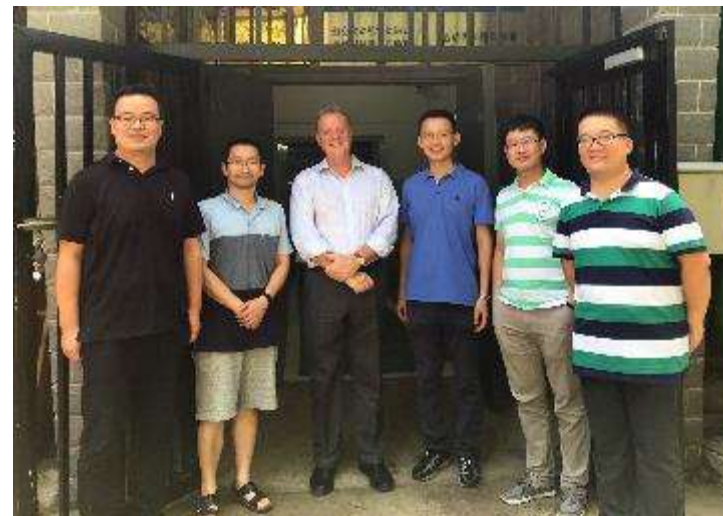
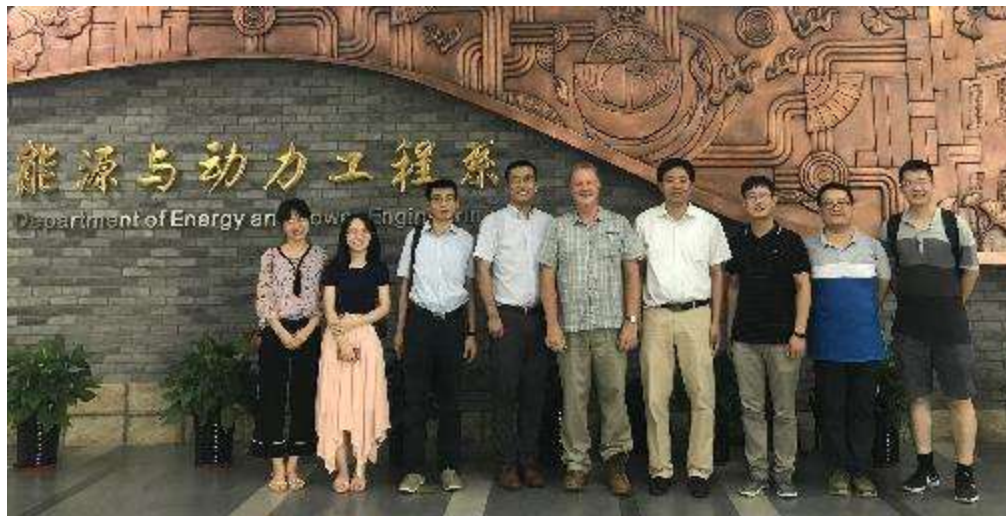


## IFRF QPR Q3: 7. Other meetings attended by IFRF (2/2)

Paper 3

### IFRF visit to China:

- Met with North China Electric Power University (NCEPU), Beihang University, Zhejiang University, Tsinghua University, China Energy Corporation (formed China Shenhua and China Guodian), Huaneng Clean Energy Research Institute and Enlandar
- Held discussions regarding establishing the Chinese Flame Research Committee in 2019
- Plan to return in January 2019

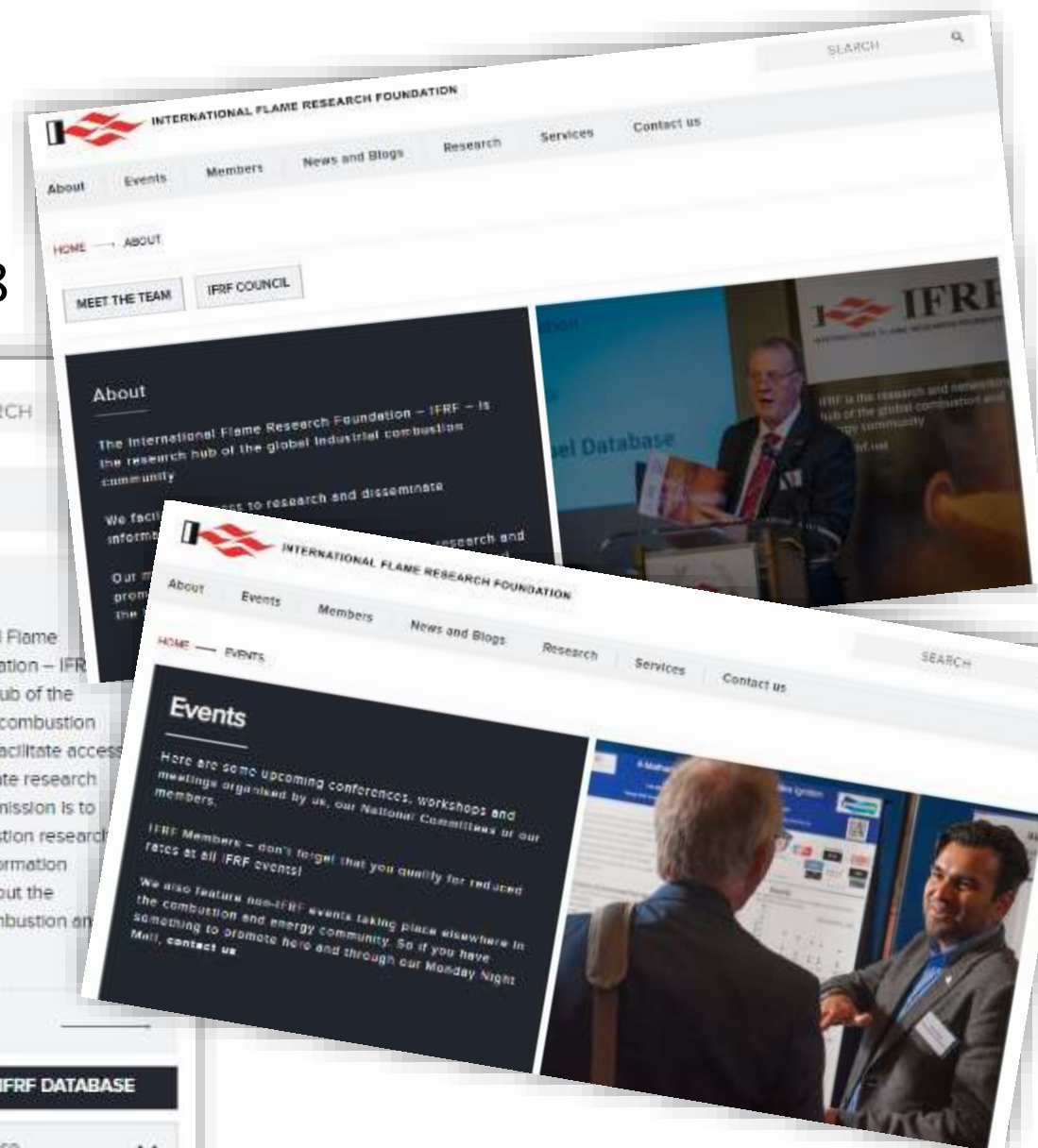
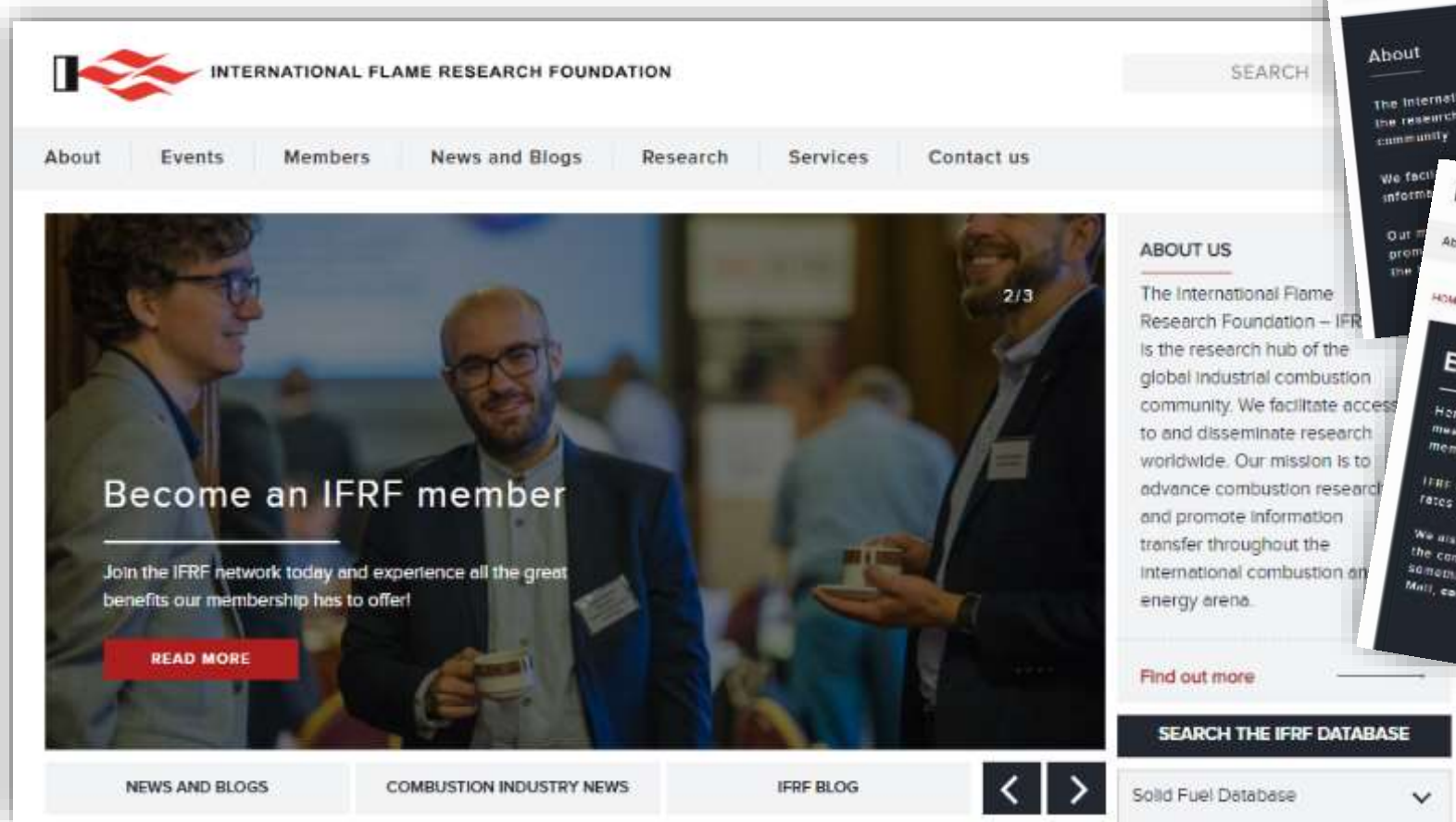




## IFRF QPR Q3: 8. New website and CRM database

Paper 3

- Test site development throughout quarter
- New website launched 11<sup>th</sup> October 2018
- IVIN support to be withdrawn 31<sup>st</sup> October 2018







## IFRF QPR Q3: 9. Marketing

Paper 3

- Please see Section 12 as all marketing during Q3 undertaken through 70<sup>th</sup> Anniversary activities



## IFRF QPR Q3: 10. Member and general enquiries

Paper 3

### Type of enquiries:

- Permission to use IFRF archive images
- Access to testing rigs
- Quotes for probe production
- Updates to member pages on the website
- Certificates demonstrating presentations at IFRF 2018

### 5 Library requests\*:

- GDTech France (1)
- Heurtey Petrochem (1)
- Lulea University of Technology (1)
- Mitsubishi Hitachi Power Systems Europe GmbH (MHPSE) (1)
- RJM International (1)

\*Down 3 from Q2



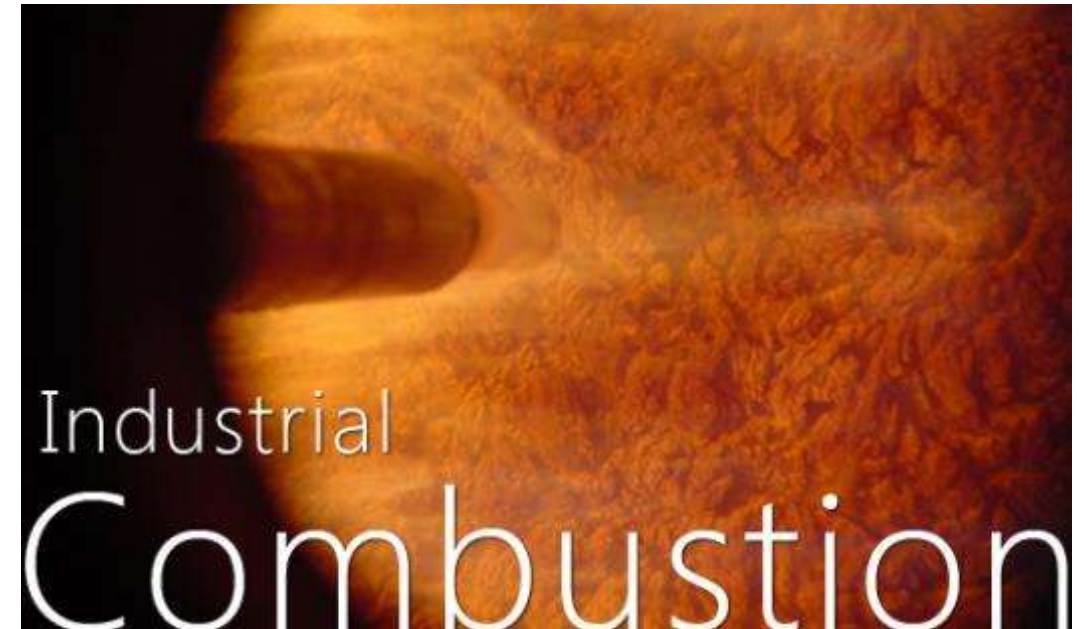


## 1 paper published in Q3 (year to date = 2)

- *'Exhaust Gas Recycling for Enhanced CO<sub>2</sub> Capture: Experimental and CFD Studies on a Micro-Gas Turbine'*  
Karen Finney, University of Sheffield, UK

## Pipeline

- Sathyabama University, India
- Chalmers University of Technology, Sweden
- Amity University Uttar Pradesh, India
- LPU, India
- JNTUA, India
- Empresa Colombiana de Petróleos-Ecopetrol, Colombia
- Angang Steel Co., China
- MLR Institute of Technology, India



**Special Edition**

Celebrating  
70 years of IFRF

**Presented at #IFRF2018**

**#IFRFAt70**

- 'Reigniting the...' blog series continued
  - 3 produced in Q3 - Gerard Flament, Sigfrid Michelfelder, and Klaus Hein
- 'Reigniting the...' brochure in development
- Congratulatory message campaign
  - Letter sent to King of Netherlands
  - Q4 plan to widen to member organisations
- All activities shared under #IFRFAt70



*"Throughout my whole industrial and academic career, IFRF has been an important partner in my many international engineering and research projects. The exceptional team spirit experienced at Ijmuiden became a guideline for most of my projects in industry and academia, and the friendship with my co-investigators and their families – which I thoroughly enjoyed during my time there – is still pleasantly alive to this day. In my opinion IFRF was – and still is – a great experience and one that is sustainable for a full lifetime!"*

**KLAUS HEIN**  
Former IFRF Investigator

#IFRFAt70 #ReignitingThe...





- Strategic Review for end of 2018 underway – Stage 1 (SWOT analysis, Member analysis) and Stage 2 (Mission, Values, Vision, 3-year Objectives)
- ExCo meeting held in July (virtual)
- Filleted Accounts for 2017 submitted to Companies House
- Limited Liability Membership (LLM) process discussions with SFRC and AFRC
- Lucy Straker annual appraisal conducted







## IFRF QPR Q3: 14. Other activities

Paper 3

- Probes quote sent to Universidad de Zaragoza following request

