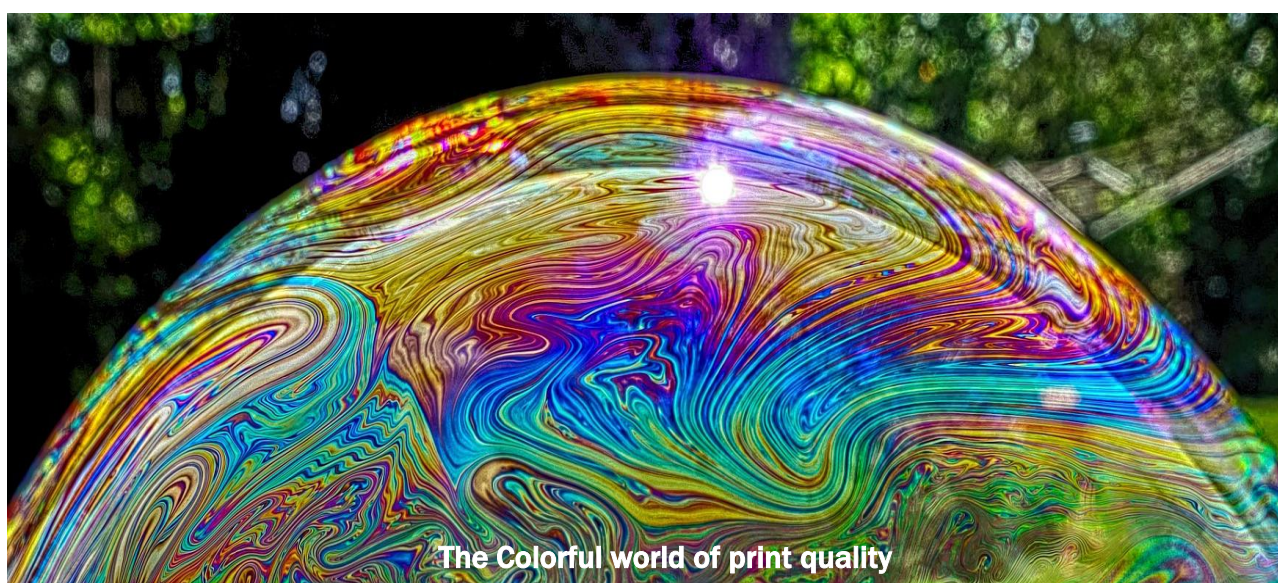




## **Competition for Membership in the International Color Quality Club 2020-2022**

**Instructions for Participants**



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## Introduction:

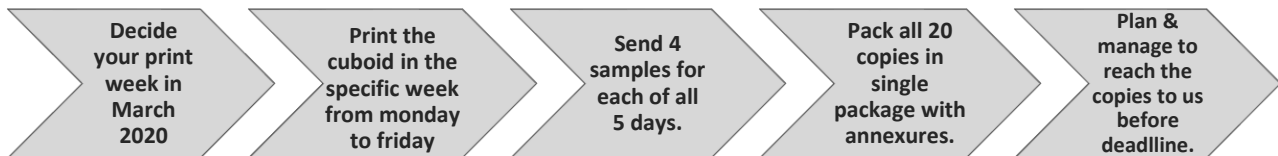
The International Color Quality Club (ICQC) membership will be presented to newspapers and magazines deserving recognition for their excellence in standardised and consistent quality printing. The focus of the club membership is to show the ability of newspaper and magazine printers to print consistently high quality according to international standards.

This competition is open to all newspapers and magazine publishers in the world. Successful participants are awarded a two years' membership in the club.

### What's New in 2020-2022:

- A new ICQC software and user interface that improves to enhance the user access
- Re-strategized to reduce the efforts spent on number of shipments
- Only one-month print schedule instead of three during previous editions.
- Flexible print schedule that can be chosen by the participant themselves

The new flow of the contest is as follows.



## 1. General instructions

### 1.1 Who can participate?

The competition is open to all publications, independent of production process or types of substrate used. Distinct categories were created for this purpose:

**Category 1** Cold set offset on newsprint

**Category 2** Heat-set offset or UV-curing offset on newsprint (Semi-commercial)

**Category 3** Heat-set offset or UV-curing offset on SC or LWC paper (Semi-commercial)

**Category 4** Extra category for printing under own standard conditions or non-standard conditions, like printed on tinted paper or using extraordinary printing condition through offset, flexography or digital printing.

**Category 5** Magazines, printed in sheet-fed offset, heat-set offset, gravure or digital inkjet  
(Weekly, fort-nightly and monthly magazines to be registered under this Category)

Publication titles can be registered either by publishing or printing companies. Each title is treated as a separate registration. One company can register several titles. One and the same title, printed at various locations, can participate individually in each case. Participation fees are charged per registration.

The competition is based on the objective evaluation carried out in the "Cuboid" target printed by the participant. Several quality parameters are evaluated from the Cuboid and the results of the evaluation are presented in a structured report. This document provides a detailed description of the quality parameters that will be evaluated and their method of evaluation.

Due to different print process techniques, different target values or evaluation methods are applied for the different technical categories. For this reason, in the following remarks the category is named in each case about the criteria.

## 1.2 Registration and Evaluation criteria:

### Registration:

- Online registration for all category **opens** from **20<sup>th</sup> Aug 2019**.
- Last date of registration for **Daily and weekly** publication will be **15<sup>th</sup> Feb 2020**
- Last date of registration for **Fort-nightly & monthly** publications will be **10<sup>th</sup> Nov 2019**

Download the registration guide here: [Registration guide](#)

For **Online registrations** visit: [Register ONLINE](#)

### Evaluation criteria:

**Table 1.2**, schedule for all the category participants

| Category   | Publication Type    | Print run  | Number of print editions evaluated | Samples to reach WAN-IFRA by | Report mailed to participants |
|--|---------------------|--|------------------------------------|------------------------------|-------------------------------|
| All category   | <b>Daily</b>        | 01 <sup>st</sup> Mar 2020 – 31 <sup>st</sup> Mar 2020<br>(5 consecutive days from Mon-Fri) | All 5                              | 10 <sup>th</sup> Apr 2020    | 30 <sup>th</sup> June 2020    |
|  | <b>Weekly</b>       | week 08 through 13<br>(17 Feb 2020 to 27 Mar 2020)   | 5 out of 6                         |                              |                               |
|  | <b>Fort-nightly</b> | week 02 through 13<br>(06 Jan 2020 to 27 Mar 2020)   | 5 out of 6                         |                              |                               |
|  | <b>Monthly</b>      | November 2019 to March 2020  | All 5                              |                              |                               |
| <p>▪ <i>Daily publications must choose any one week in the month of March 2020 and print the cuboid for 5 consecutive days from Mondays to Friday. Print run will not be entertained in any other month than March 2020 and must be 5 consecutive days only and copies must reach WAN-IFRA office before the late date of <b>10<sup>th</sup> Apr 2020</b>.</i></p> |                     |  |                                    |                              |                               |

All the participant category should send 4 copies for each of the issue day, week or month depending upon their type of publication. But we pick **2 copies in random out of 4** and evaluate those two.

**Dailies:** The daily publications of all category should choose 1 full print week (1 week out of 4 available week in march 2020). Its optional to choose any print week print week in March, but its mandatory to print to print and send samples from Monday to Friday of the chosen print week in month of March 2020. Then, Send 4 copies from each of the five consecutive days printed, so **4 Copies X 5 Consecutive Days (Mon-Fri only) = 20 copies** should sent in single package.

**Weeklies:** Print cuboid from calendar week of 8 through 13 and send us 4 copies of each of all 6 editions (4 copies X 6 editions = 24 samples). Send all 24 copies at the end of Mar 2020. We will evaluate any 5 editions in random out of 6 editions sent.

**Fortnightlies:** Print cuboid from calendar week of 2 through 13 and send us 4 copies of each of all 6 editions (4 copies X 6 editions = 24 samples). Send all 24 copies at the end of Mar 2020. We will evaluate any 5 in random out of 6 editions sent.

**Monthlies:** Monthly publication should send samples from November 2019 through March 2020. Send us 4 copies of each monthly editions after every month print run. We will evaluate all 6 editions.

### 1.3 Downloading and using the print test element – The Cuboid

The Cuboid print test element for ICQC 2020-2022 can be downloaded from the website [www.colorqualityclub.org](http://www.colorqualityclub.org) from **15 October 2019**. The same test element should be used to print on all the print runs.

Treat the Cuboid like a supplied color advertisement! Position the test element on any page of the publication title you have registered for the competition. The Cuboid is non-scalable. The size of the Cuboid must not be changed to allow correct evaluation.

Print the Cuboid under standardised printing conditions as part of a regular issue of your publication. If you do not wish the Cuboid to appear in the distributed issue, you can exchange plates and produce a part-run including the Cuboid that is not for distribution and submit these copies for evaluation.

Cuboid is common for pre-check and actual contest.

### 1.4 Pre-Check

**Pre-check is not mandatory for every participant, it's an optional only.**

Pre-check is a trial print run which simulates the actual contest procedures and evaluations, but the results of pre-check are not considered for final membership. WAN-IFRA will offer two pre-check tests before the actual contest. We evaluate the copies with the same instruments and workflow that will be used for the competition. Pre-Check will help participants to know their level of preparedness and study the process deviations to re-work towards the contest.

The Cuboid test target is the same for the Pre-Check and for actual contest. **GPQ will not be evaluated for pre-check.**

**Pre-check 1:** Publications who register until **30<sup>th</sup> November 2019** will get a chance to participate in the "Pre-check 1".

**Pre-check 2:** Publications who register until **25<sup>st</sup> January 2020** will get a chance to participate in the "Pre-check 2".

Pre-check is only available for the registered participants. Both the pre-check is not mandatory for the participants, its only option to not participate or participate in any one or participate in both ( pre-check 1 & pre-check 2) if you register the contest before the date specified in the table below.

**Table 1.4, Pre-check schedule**

| Category     | Publication Type    | Eligibility (Registered till) | Pre-check period           | Samples to reach WAN-IFRA by | Report mailed to participants | No of samples to send   |
|--------------|---------------------|-------------------------------|----------------------------|------------------------------|-------------------------------|---|
| All category | <b>Pre-check 1*</b> | 30 <sup>th</sup> Nov 2019     | 25 Nov 2019 to 06 Dec 2019 | 31 <sup>th</sup> Dec 2019    | 27 <sup>th</sup> Jan 2020     | <b>CAT 1,2,3,4 &amp; 5:</b><br>2 Copies from each of 5 consecutive days |
|              | <b>Pre-check 2*</b> | 25 <sup>st</sup> Jan 2020     | 20 Jan 2020 to 31 Jan 2020 | 14 <sup>th</sup> Feb 2020    | 28 <sup>th</sup> Feb 2020     |   |

\* Pre-check copies should be printed and sent only from the dates mentioned in table, any other dates will not be evaluated.

#### Copies for pre-check:

Daily publications **should send 2 copies for each of the 5 consecutive days** (Mon-Fri only) printed between the pre-check period mentioned in table 1.4 above. I.e. **2 copies X 5 Days =10 copies.**

For **Cat4 & 5**, average of measured values of the 5 days will be the target reference and points are calculated for the 5 copies ( of 5 days) by measuring the deviation from the target reference

### 1.5 Shipping instructions

To prevent premature aging of the printed samples, should be packed in such way that they are protected against light and humidity. Printed samples not received on time cannot be included in the evaluation.

While shipping the copies, please ensure that you attach a declaration that the copies are for testing purposes and do not have any commercial value. For declaration format, refer to **Annex 1**.

Since publications from many different countries and languages participate in the competition, we may not be able to identify the publication title and printing location by seeing the copy. Hence, we request the participants to fill the leaflet in **Annex 2** in English language and insert it into the package. You can find Annex 1 & 2 at the end of this instruction document. Shipment address is mentioned in **page 21**.

### 1.6 Evaluation reports

The final evaluation report will have 5 reports individual report (for the submitted 5 days/ 5 week/ 5 month samples) with over all summary of points and tracks.

For the evaluation of the general printing quality, two sample copies per participating title will be selected at random from the submitted copies from different competition months.. The results of this evaluation are included in the final report.

The final report also constitutes the concluding report. This will indicate whether your title has been awarded membership in the Color Quality Club 2020-2022. Your evaluation reports are strictly confidential and intended only for you.

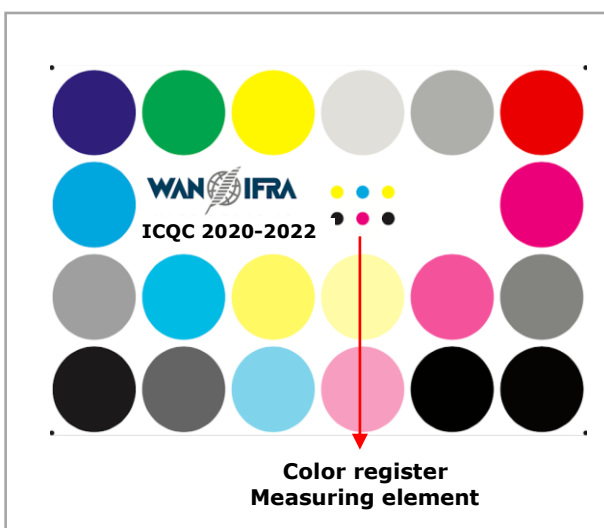
### 1.7 Club membership

Club membership is achieved by publication titles that are produced in consistently high-quality printing throughout the test period in accordance with the targets defined in the instructions. To be accepted into the International Color Quality Club, it is necessary to obtain the minimum points stated in the instructions.

The new members in the International Color Quality Club 2020-2022 will be announced with the mailing of the final evaluations in June 2020. The winners will be honoured at a special ceremony held during the **IFRA World Publishing Expo, October 2020, in Berlin, Germany**.

For each successful ICQC participation, winner companies will collect one "star". Companies that have been successful repeatedly in at least 5 competition years will become part of WAN-IFRA's prestigious "Star Club". Stars can also be collected by achieving WAN-IFRA's Certification for Standardised Printing. Please let us know if you need more details.

### 1.8 The Cuboid



The Cuboid can be positioned in the same way as a four-color ad on a publication page. The format is 42 x 28 mm; the PDF is available in CMYK.


**The Cuboid must not be scaled!**

The Cuboid can be used in horizontal or vertical format. Avoid positioning in the fold, as otherwise the evaluation can be influenced by set-off and soiling.

The reverse (backside page) of the Cuboid must be printed with publication-type contents (should have texts or editorial content, should not have solid advertisement or images). Points are subtracted for blank reverse side, deviating paper types, and different or missing pinholes.

*The figures on the left do not correspond to the original size; the colors may not be used as reference.*

**CMYK color values and measuring patches of the Cuboid**

|   | 1       | 2    | 3   | 4    | 5   | 6    |      |
|---|---------|------|---|------|-----|------|------|
| A | Cyan    | 100% | 100%  | 0%   | 10% | 30%  | 0%   |
|   | Magenta | 100% | 0%  | 0%   | 8%  | 24%  | 100% |
|   | Yellow  | 0%   | 100%  | 100% | 8%  | 24%  | 100% |
|   | Black   | 0%   | 0%  | 0%   | 0%  | 0%   | 0%   |
| B | Cyan    | 100% |  |      |     | 0%   | 0%   |
|   | Magenta | 0%   |   |      |     | 0%   | 100% |
|   | Yellow  | 0%   |   |      |     | 0%   | 0%   |
|   | Black   | 0%   |   |      |     | 0%   | 0%   |
| C | Cyan    | 0%   | 70%   | 0%   | 0%  | 0%   | 50%  |
|   | Magenta | 0%   | 0%  | 0%   | 0%  | 70%  | 42%  |
|   | Yellow  | 0%   | 0%  | 70%  | 40% | 0%   | 42%  |
|   | Black   | 40%  | 0%  | 0%   | 0%  | 0%   | 0%   |
| D | Cyan    | 0%   | 0%  | 40%  | 0%  | 52%  | 44%  |
|   | Magenta | 0%   | 0%  | 0%   | 40% | 44%  | 38%  |
|   | Yellow  | 0%   | 0%  | 0%   | 0%  | 44%  | 38%  |
|   | Black   | 100% | 70%   | 0%   | 0%  | 100% | 100% |

The Cuboid contains two 4-Color blacks in patches D5 and D6. Patch D5 corresponds to a Total Ink Coverage (TIC) of 240% and Patch D6 corresponds to a TIC of 220%.

ISO 12647-3:2013 standard recommends 220% TIC for coldset on newsprint. So,

Patch D6 is used to measure 4-Color Black for category 1.

For Categories 2, 3, 4 and 5, patch D5 (TIC 240%) is used.

**1.9 Evaluation criteria for International Color Quality Club 2020-2022**

To be included in the International Color Quality Club 2020-2022, a minimum number of points must be reached within each test run. It is also required that each criterion meets the required minimum number of points during the monthly evaluations. Only if all the criteria in the following table have been met both horizontally and vertically membership is reached.

**Categories 1, 2 and 3**

| Criterion                                   | Max. points Test 1 | Max. points Test 2 | Max. points Test 3 | Max. points Test 4 | Max. points Test 5 | Max. points GPQ | Max. points per criterion total | Min. points per criterion total | Successful |
|---|--------------------|--------------------|--------------------|--------------------|--------------------|-----------------|---------------------------------|---------------------------------|------------|
| 2.1 News-shade                              | 30                 | 30                 | 30                 | 30                 | 30                 | –               | 150                             | 100                             | Yes?       |
| 2.2 Mid-tone spread                         | 10                 | 10                 | 10                 | 10                 | 10                 | –               | 50                              | 30                              | Yes?       |
| 2.3.1 Dot gain 40%                          | 10                 | 10                 | 10                 | 10                 | 10                 | –               | 50                              | 30                              | Yes?       |
| 2.3.2 Dot gain 70%                          | 10                 | 10                 | 10                 | 10                 | 10                 | –               | 50                              | 30                              | Yes?       |
| 2.4 Grey balance                            | 30                 | 30                 | 30                 | 30                 | 30                 | –               | 150                             | 115                             | Yes?       |
| 2.5 Color space in %                        | 11                 | 11                 | 11                 | 11                 | 11                 | –               | 55                              | 35                              | Yes?       |
| 2.6 Color conformity Delta E                | 49                 | 49                 | 49                 | 49                 | 49                 | –               | 245                             | 180                             | Yes?       |
| 2.7 Color register                          | 30                 | 30                 | 30                 | 30                 | 30                 | –               | 150                             | 150                             | Yes?       |
| 2.8 General printing quality                | –                  | –                  | –                  | –                  | –                  | 576             | 576                             | 500                             | Yes?       |
| Deduction of points                         | 180                | 180                | 180                | 180                | 180                | 576             |                                 |                                 |            |
| Maximum points                              | <b>180</b>         | <b>180</b>         | <b>180</b>         | <b>180</b>         | <b>180</b>         |                 |                                 |                                 |            |
| Minimum points per test                     | <b>156</b>         | <b>156</b>         | <b>156</b>         | <b>156</b>         | <b>156</b>         |                 |                                 |                                 |            |
| Successful:                                 | Yes?               | Yes?               | Yes?               | Yes?               | Yes?               |                 |                                 |                                 |            |
| Precondition for ICQC 2020-2022 membership: |                    |                    |                    |                    |                    |                 |                                 | 14 x "Yes"                      |            |

**Categories 4 and 5**

| Criterion                    | Max. points Test 1                          | Max. points Test 2 | Max. points Test 3 | Max. points Test 4 | Max. points Test 5 | Max. points GPQ | Max. points per criterion total | Min. points per criterion total | Successful |
|------------------------------|---|--------------------|--------------------|--------------------|--------------------|-----------------|---------------------------------|---------------------------------|------------|
| 2.1 News-shade               | 30  | 30                 | 30                 | 30                 | 30                 | –               | 150                             | 100                             | Yes?       |
| 2.2 Mid-tone spread          | 10  | 10                 | 10                 | 10                 | 10                 | –               | 50                              | 30                              | Yes?       |
| 2.3.1 Dot gain 40%           | 10  | 10                 | 10                 | 10                 | 10                 | –               | 50                              | 30                              | Yes?       |
| 2.3.2 Dot gain 70%           | 10  | 10                 | 10                 | 10                 | 10                 | –               | 50                              | 30                              | Yes?       |
| 2.4 Grey balance             | 30  | 30                 | 30                 | 30                 | 30                 | –               | 150                             | 115                             | Yes?       |
| 2.5 Color space in %         | NA  | NA                 | NA                 | NA                 | NA                 | –               | NA                              | NA                              | NA         |
| 2.6 Color conformity Delta E | 60  | 60                 | 60                 | 60                 | 60                 | –               | 300                             | 215                             | Yes?       |
| 2.7 Color register           | 30  | 30                 | 30                 | 30                 | 30                 | –               | 150                             | 150                             | Yes?       |
| 2.8 General printing quality | –   | –                  | –                  | –                  | –                  | 576             | 576                             | 500                             | Yes?       |
| Deduction of points          |   |                    |                    |                    |                    |                 |                                 |                                 |            |
| Maximum points               | <b>180</b>                                  | <b>180</b>         | <b>180</b>         | <b>180</b>         | <b>180</b>         |                 |                                 |                                 |            |
| Minimum points per test      | <b>156</b>                                  | <b>156</b>         | <b>156</b>         | <b>156</b>         | <b>156</b>         |                 |                                 |                                 |            |
| Successful:                  | Yes?  | Yes?               | Yes?               | Yes?               | Yes?               |                 |                                 |                                 |            |
|                              | Precondition for ICQC 2020-2022 membership: |                    |                    |                    |                    |                 |                                 | 13 x "Yes"                      |            |

A participant will be successful of membership only if meets all the "Yes" horizontally for each parameter and vertically for each test days. That means, after the final evaluation the participant should achieve at least minimum points specified for each of the parameters (newsprint, Mid-tone, Dot gain, etc..) with a minimum of 156 points every month. Only then, a participant is awarded membership.



### 1.10 Evaluation set up and process

The objective evaluation is divided into the evaluation of the colorimetric data of the printed Cuboid and of the register measurement element. We measure all test copies under standardised conditions using a calibrated measuring instrument, so that the result can be assessed in a way that is as objective and comparative as possible. The evaluation of the Cuboid permits qualified statements in relation to the conformity of the criteria news-shade, mid-tone spread, dot gain at 40% and 70%; grey balance, color space, color conformity and color register precision.

Evaluation points are awarded in accordance with the degree to which the target values are satisfied. The closer the measured values are to the targets of the ISO and WAN-IFRA standards, the more points can be achieved. If the values are within the tolerance range, the points will be awarded in a linear fashion to the calculated deviations. No points are awarded if the tolerance values are exceeded.

The color and density measurement of the Cuboid is carried out with the aid of the automatic X-Rite "eX-act" spectro-densitometer. The color measurements are done in accordance with ISO 13655 with angle of observation  $2^\circ$ , light source D50, measuring geometry  $45^\circ/0^\circ$  or  $0^\circ/45^\circ$  and black backing. The density values are measured with status E, polarisation filter ON and relative to paper. Aperture size of the instrument is 2 mm. Dot gain is calculated by the Murray-Davies formula. We use the Techkon "RMS 910" to measure color register.



*X-Rite "eXact" color measuring instrument (left) and Techkon "RMS 910" register measuring instrument (right)*

In order to evaluate the general printing quality, two randomly selected copies from two different competition months are taken from the submitted sample copies. The first 16 four-color pages of each newspaper copy are assessed. The first 32 four-color pages of each magazine copy are assessed. The results of this evaluation are published in the final report.

### 1.11 Inter-instrument agreement

In an international competition such as the ICQC, it is crucial to know how accurately the values measured by the WAN-IFRA spectrophotometer are and how instruments used by WAN-IFRA agree with those of the participants.

All participants will receive a sample Cuboid from WAN-IFRA and corresponding values measured from WAN-IFRA's spectrophotometer (Instrument, which will be used to evaluate the Cuboid during the contest period). Participants can compare the results of WAN-IFRA with their own measurement instruments. It's advisable to calibrate the instruments before beginning of the contest.

Participants who register the contest until **30th November 2019** will get the reference sample before the Pre-Check run. Others participant will get the reference within 4 weeks.

## 2. Evaluation and scoring system for different criteria

### 2.1 News-shade

Newsprint or paper shade (or color of the paper) is measured in accordance with light source D50, measuring geometry 45°/0° or 0°/45° and black backing. The news-shade is measured on non-printed areas of the Cuboid in patch B5.

Points are allocated based on the following criteria:

*For competition categories 1 and 2:*

| <i>Color values</i>                 | <i>Points per evaluation</i> |
|-------------------------------------|------------------------------|
| $L^* = 78$ or more                  | 10                           |
| $L^* =$ less than 78                | 0                            |
| $a^* =$ between -2 and 2            | 10                           |
| $a^* =$ less than -2 or more than 2 | 0                            |
| $b^* =$ between -2 and 5            | 10                           |
| $b^* =$ less than -2 or more than 5 | 0                            |
| Total:                              | 30                           |

*For competition category 3:*

| <i>Color values</i>                 | <i>Points per evaluation</i> |
|-------------------------------------|------------------------------|
| $L^* = 83$ or more                  | 10                           |
| $L^* =$ less than 83                | 0                            |
| $a^* =$ between -2 and 0            | 10                           |
| $a^* =$ less than -2 or more than 0 | 0                            |
| $b^* =$ between -2 and 3            | 10                           |
| $b^* =$ less than -2 or more than 3 | 0                            |
| Total                               | 30                           |

*For competition categories 4 and 5 the following process applies:*

The reference is in each case the mean value of  $L^*$ ,  $a^*$  and  $b^*$  of all five test runs measured on the printed Cuboid. The color of the paper that is used should be within the tolerances listed in the table throughout the competition period. Delta  $L^*$ ,  $a^*$  &  $b^*$  represent the maximum permissible deviation from mean value.

| <i>Deviation from the mean value of the test runs</i> | <i>Points per evaluation</i> |
|---|------------------------------|
| Delta $L^*$ less than or equal to 2                   | 10                           |
| Delta $L^*$ more than 2                               | 0                            |
| Delta $a^*$ less than or equal to 1                   | 10                           |
| Delta $a^*$ more than 1                               | 0                            |
| Delta $b^*$ less than or equal to 1                   | 0                            |
| Delta $b^*$ more than 1                               | 0                            |
| Total   | 30                           |

## 2.2 Mid-tone spread

The patches D3, D4, C4 and C1 of the Cuboid are used to measure the CMYK mid-tone spread. Difference in dot percentage between the color with highest dot gain and the color with lowest dot gain is called mid-tone spread. Points are awarded based on the deviation from the 6% production tolerance in the 40% measuring patch specified by the standard. It is not considered whether the dot gain is within the tolerances of the target Tone Value Increase (TVI) curve for all the categories.

For categories 1, 2, 3, 4 and 5:

| <i>Mid-tone spread</i>          | <i>Points per evaluation</i> |
|---------------------------------|------------------------------|
| <i>Less than or equal to 3%</i> | <i>10</i>                    |
| <i>Corresponds to 6%</i>        | <i>2</i>                     |
| <i>Greater than 6%</i>          | <i>0</i>                     |

Points are awarded in a linear process between 3% and 6%. The minimum no. of points is 2.

## 2.3 Dot gain

### 2.3.1 Dot gain at nominal 40%

The patches D3, D4, C4 and C1 of the Cuboid are used for measuring the CMYK dot gain in the 40% area. Each color is evaluated individually.

For category 1, 2 and 3, deviation from the reference value of 2% or less brings 2.5 points per color ( $4 \times 2.5 = 10$ ). In the case of a deviation between 2% to 5%, points are awarded in a linear process per color up to the minimum number of 1 point. With a deviation, more than 5% no points are awarded.

For competition category 1, 2, 3, 4 and 5:

| <i>Dot gain in the 40% patch per color (C, M, Y, K)</i> | <i>Points per evaluation</i> |
|---|------------------------------|
| <i>Deviation less than or equal to 2%</i>               | <i>2.5</i>                   |
| <i>Deviation corresponds to 5%</i>                      | <i>1</i>                     |
| <i>Deviation greater than 5%</i>                        | <i>0</i>                     |

Points are awarded in a linear process between 2% and 5%. The minimum no. of point is 1.

For competition category 1 the reference value is 26.2% dot gain in the 40% patch.

For competition categories 2 and 3 the reference value is 22% dot gain in the 40% patch.

For competition categories 4 and 5, the reference value is the average of the dot gain measurements in the 40% patch of all five test run measurements.

### 2.3.2 Dot gain at nominal 70%

Patches C2, C5, C3 and D2 of the Cuboid are used for measuring the CMYK dot gain in the 70% range. Each color is evaluated individually.

For category 1, 2 and 3, a deviation from the reference value of 2% or less brings 2.5 points per color ( $4 \times 2.5 = 10$ ). In the case of a deviation between 2% and 5%, points are awarded in a linear process per color up to the minimum number of 1 point. With a deviation more than 5% no points are awarded.

For competition category 1, 2, 3, 4 and 5:

| <i>Dot gain in the 70% patch per color (C, M, Y, K)</i> | <i>Points per evaluation</i> |
|---|------------------------------|
| <i>Deviation less than or equal to 2%</i>               | <i>2.5</i>                   |
| <i>Deviation corresponds to 5%</i>                      | <i>1</i>                     |
| <i>Deviation greater than 5%</i>                        | <i>0</i>                     |

Points are awarded in a linear process between 2% and 5%. The minimum no. of points is 1.

For competition category 1 the reference value is 19.8% dot gain in the 70% patch.

For competition categories 2 and 3 the reference value is 17.6% dot gain in the 70% patch.

For competition categories 4 and 5 the reference value is as follows:

76% of the average value of the dot gain measurements in the 70% patch from all test runs.

*Example: The average dot gain at nominal 40% is 25%. In such a case, the reference value for dot gain at nominal 70% is 19%, as  $25 \times 0.76 = 19$ .*

### 2.4 Grey balance in print

The patches A4, A5, C6 and D5 or D6 of the Cuboid are used for the measurement.

The reference grey ( $a^*$  and  $b^*$ ) is calculated as follows: The lightest and darkest measured values (color of the paper, patch B4, and CMYK [4c black], patch D5 or D6) are connected via a straight line. This produces a reference grey axis in the color space that is used as an individual scale for the evaluation.

Based on the individually measured lightness value  $L^*$  of light, medium and dark grey on the Cuboid concerned in each case, the color values  $a^*$  and  $b^*$  are mathematically calculated on the reference grey axis. These serve as targets for the measured  $a^*$  and  $b^*$  values of the grey patches A4, A5 and C6. We refer to the thus-calculated color difference as "Delta  $C^*$  absolute".

For Category 1, patch D6 is measured for the  $L^*a^*b^*$  values of 4-color-black. Patch D6 corresponds to a TIC of 220%.

For category 2, 3, 4 and 5, patch D5 is measured for  $L^*a^*b^*$  4-Color black. Patch D5 corresponds to a TIC of 240%.

Points are awarded based on the below table.

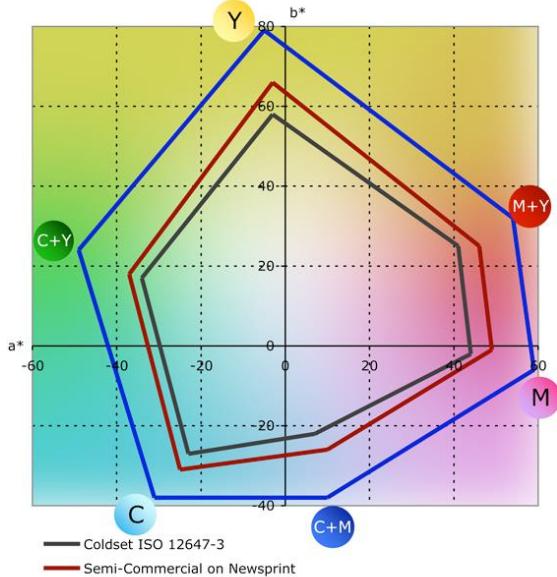
For competition categories 1, 2, 3, 4 and 5:

| <i>Deviation per grey patch (A4, A5, C6)</i>                       | <i>Points per Grey patch and evaluation</i> |
|--|---|
| <i>Less than or equal to 1.5 "Delta <math>C^*</math> absolute"</i> | <i>10</i>                                   |
| <i>Corresponds to 3 "Delta <math>C^*</math> absolute"</i>          | <i>2</i>                                    |
| <i>Greater than 3 "Delta <math>C^*</math> absolute"</i>            | <i>0</i>                                    |

Points are awarded in a linear process for deviation between 1.5 and 3 Delta C\*. Minimum no. of points is 2.

## 2.5 Color space

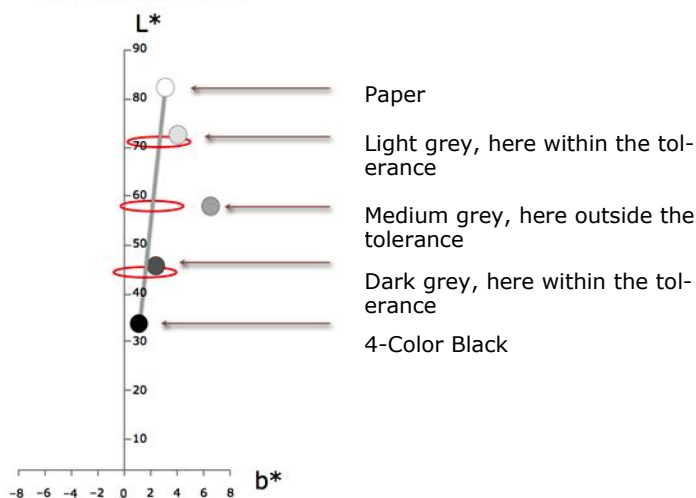
Target Colour Gamuts, a\*b\* Diagram



The  $L^*a^*b^*$  values of the patches A6, A2, A1, B1, B6, A3, B5 and D5 or D6 of the Cuboid are used for the calculation. The size of the color space range, which results from the combination of the colors CMY and RGB as well as the paper white and 4C black, can be shown as a three-dimensional entity within the  $L^*a^*b^*$  color space.

The  $a^*/b^*$  diagram shows the different target color spaces. The black color space corresponds to the standard cold-set newspaper offset process in accordance with ISO 12647-3:2013. With the aid of heat-set drying or UV curing it is possible to print a larger color space range (red) on the same paper. If in addition a higher-quality paper grade (SC or LWC) is used, this will further enlarge the color space (blue).

For category 1, patch D6 (TIC 220%) is measured for the



*The individual reference grey axis is the connection between the color of the paper and CMY K(4C black)*

*The grey axis is in most cases not parallel to the lightness axis  $L^*$ , but instead at an angle to it because the typical yellow hue of newsprint is reduced in the shadows.*

*The printed CMY grey tones are compared to the reference grey axis. The deviation is referred to as "Delta C\* absolute".*

$L^*a^*b^*$  values of 4-C Black.

For category 2 and 3 patch D5 (TIC 240%) is measured for the  $L^*a^*b^*$  values of 4-C Black. For categories 4 and 5 this color space evaluation is not used.

The following color references apply for calculation of color space and color conformity (see section 2.6):

**Color reference values for competition category 1**

| Colors            | L* | a*  | b*  |
|-------------------|----|-----|-----|
| Cyan              | 57 | -23 | -27 |
| Magenta           | 54 | 44  | -1  |
| Yellow            | 78 | -3  | 58  |
| Black (K)         | 36 | 1   | 4   |
| Green, Y + C      | 53 | -34 | 17  |
| Blue, C + M       | 41 | 7   | -22 |
| Red, M + Y        | 52 | 41  | 25  |
| 4c-Black, CMYK    | 34 | 1   | 2   |
| White, news-shade | 82 | 0   | 3   |

**Color reference values for competition category 2**

| Colors            | L* | a*  | b*  |
|-------------------|----|-----|-----|
| Cyan              | 55 | -25 | -31 |
| Magenta           | 51 | 49  | -1  |
| Yellow            | 78 | -3  | 66  |
| Black (K)         | 35 | 1   | 2   |
| Green, Y + C      | 50 | -37 | 18  |
| Blue, C + M       | 35 | 10  | -26 |
| Red, M + Y        | 49 | 46  | 25  |
| 4c-Black, CMYK    | 30 | 1   | 2   |
| White, news-shade | 82 | 0   | 3   |

**Color reference values for competition category 3**

| Colors            | L* | a*  | b*  |
|-------------------|----|-----|-----|
| Cyan              | 56 | -31 | -38 |
| Magenta           | 50 | 59  | -6  |
| Yellow            | 83 | -5  | 79  |
| Black (K)         | 27 | 0   | 1   |
| Green, Y + C      | 50 | -49 | 24  |
| Blue, C + M       | 33 | 10  | -38 |
| Red, M + Y        | 48 | 54  | 32  |
| 4c-Black, CMYK    | 26 | 0   | 1   |
| White, news-shade | 86 | -1  | 2   |

For competition categories 1, 2 and 3, the following applies:

| Measured color space                            | Points per evaluation |
|---|-----------------------|
| At least 90% of the reference color space       | 11                    |
| Corresponds to 75% of the reference color space | 2                     |
| Less than 75% of the reference color space      | 0                     |

If the color gamut is between 75% and 90% of the reference color gamut points will be deducted in the range from 11 to 2 points. If the color gamut is smaller than 75% no points will be applied.

In categories 4 and 5 the criteria and points of this section (2.5) are combined with those of section 2.6. You will find the detailed instructions in section 2.6.

## 2.6 Color conformity

See 2.5 (color space) for the target color values.

*Calculation method (categories 1, 2 and 3):*

If the measured values of the primary and secondary colours lie within a defined color distance from the reference value (Delta E<sub>LAB 76</sub>), 7 points per color are awarded. Therefore, a total of 49 points per evaluation can be achieved.

| <i>Color difference Delta E LAB 76</i> |                                | <i>Points per evaluation</i> |
|--|--------------------------------|------------------------------|
| <i>Cyan</i>                            | <i>Less than or equal to 5</i> | <i>7</i>                     |
|  | <i>Greater than 5</i>          | <i>0</i>                     |
| <i>Magenta</i>                         | <i>Less than or equal to 5</i> | <i>7</i>                     |
|  | <i>Greater than 5</i>          | <i>0</i>                     |
| <i>Yellow</i>                          | <i>Less than or equal to 5</i> | <i>7</i>                     |
|  | <i>Greater than 5</i>          | <i>0</i>                     |
| <i>Black (K)</i>                       | <i>Less than or equal to 5</i> | <i>7</i>                     |
|  | <i>Greater than 5</i>          | <i>0</i>                     |
| <i>Red (M + Y)</i>                     | <i>Less than or equal to 8</i> | <i>7</i>                     |
|  | <i>Greater than 8</i>          | <i>0</i>                     |
| <i>Green (M + Y)</i>                   | <i>Less than or equal to 8</i> | <i>7</i>                     |
|  | <i>Greater than 8</i>          | <i>0</i>                     |
| <i>Blue (M + C)</i>                    | <i>Less than or equal to 8</i> | <i>7</i>                     |
|  | <i>Greater than 8</i>          | <i>0</i>                     |
| <i>Total</i>                           |                                | <i>49</i>                    |

If the measured color difference is greater than required, it is calculated in a second step whether the measured chroma (C\*<sub>ab</sub>) is greater or smaller than the chroma of the reference color.

If the measured chroma is smaller than required, no points are awarded. If the measured chroma is greater than that of the reference color, a final check is carried out to establish whether the measured color lies within an acceptable color angle difference (Delta h<sub>ab</sub>) from the target as well as whether the lightness is sufficiently close to that of the target color value (Delta L).

| <i>If color difference Delta E LAB 76 is exceeded, but the reference chroma achieved (in case of Black [K] unachieved), then:</i> |  | <i>Point per evaluation</i> |
|---|--|-----------------------------|
| <i>Cyan</i>   | <i>Delta L less than 5</i>                   | <i>7</i>                    |
|   | <i>Delta h less than 2.5</i>                 |                             |
|   | <i>One of the requirements not satisfied</i> | <i>0</i>                    |
| <i>Magenta</i>  | <i>Delta L less than 5</i>                   | <i>7</i>                    |
|   | <i>Delta h less than 2.5</i>                 |                             |
|   | <i>One of the requirements not satisfied</i> | <i>0</i>                    |
| <i>Yellow</i>   | <i>Delta L less than 5</i>                   | <i>7</i>                    |
|   | <i>Delta h less than 2.5</i>                 |                             |
|   | <i>One of the requirements not satisfied</i> | <i>0</i>                    |
| <i>Black (K)</i>  | <i>Delta L less than 5</i>                   | <i>7</i>                    |
|   | <i>Delta h less than 2.5</i>                 |                             |
|   | <i>One of the requirements not satisfied</i> | <i>0</i>                    |
| <i>Red (M + Y)</i>  | <i>Delta L less than 8</i>                   | <i>7</i>                    |
|   | <i>Delta h less than 5</i>                   |                             |
|   | <i>One of the requirements not satisfied</i> | <i>0</i>                    |
| <i>Green (M + Y)</i>  | <i>Delta L less than 8</i>                   | <i>7</i>                    |
|   | <i>Delta h less than 5</i>                   |                             |
|   | <i>One of the requirements not satisfied</i> | <i>0</i>                    |
| <i>Blue (M + C)</i>   | <i>Delta L less than 8</i>                   | <i>7</i>                    |
|   | <i>Delta h less than 5</i>                   |                             |
|   | <i>One of the requirements not satisfied</i> | <i>0</i>                    |
| <i>Total</i>  |  | <i>49</i>                   |

#### Calculation method for **categories 4 and 5**

For Categories 4 and 5 the average of the L\* a\*b\* color values of all five test runs constitutes the reference per color (C, M, Y, K, R, G, B). In this case, the color difference (Delta E<sub>LAB 76</sub>) therefore represents the distance to the average of all five measurements.

Points are awarded in accordance with the following system:

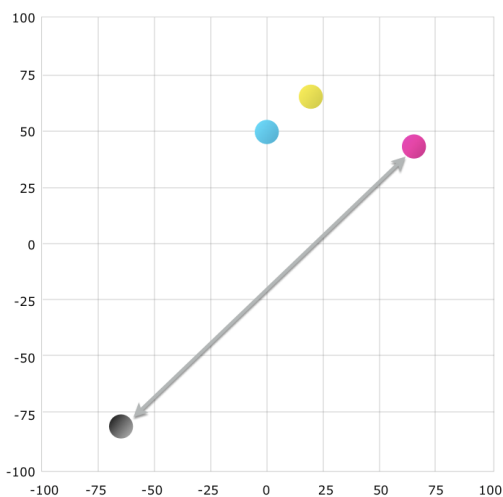
| <i>Color difference Delta E LAB 76</i> |                                | <i>Points per evaluation</i> |
|--|--------------------------------|------------------------------|
| <i>Cyan</i>                            | <i>Less than or equal to 2</i> | <i>8</i>                     |
|  | <i>Greater than 2</i>          | <i>0</i>                     |
| <i>Magenta</i>                         | <i>Less than or equal to 2</i> | <i>8</i>                     |
|  | <i>Greater than 2</i>          | <i>0</i>                     |
| <i>Yellow</i>                          | <i>Less than or equal to 2</i> | <i>8</i>                     |
|  | <i>Greater than 2</i>          | <i>0</i>                     |
| <i>Black (K)</i>                       | <i>Less than or equal to 2</i> | <i>8</i>                     |
|  | <i>Greater than 2</i>          | <i>0</i>                     |



|                           |                                |           |
|---------------------------|--------------------------------|-----------|
| <i>Red<br/>(M + Y)</i>    | <i>Less than or equal to 4</i> | <i>8</i>  |
|                           | <i>Greater than 4</i>          | <i>0</i>  |
| <i>Green<br/>(M + Y)</i>  | <i>Less than or equal to 4</i> | <i>8</i>  |
|                           | <i>Greater than 4</i>          | <i>0</i>  |
| <i>Blue<br/>(M + C)</i>   | <i>Less than or equal to 4</i> | <i>8</i>  |
|                           | <i>Greater than 4</i>          | <i>0</i>  |
| <i>4c-Black,<br/>CMYK</i> | <i>Less than or equal to 4</i> | <i>4</i>  |
|                           | <i>Greater than 4</i>          | <i>0</i>  |
| <i>Total</i>              |                                | <i>60</i> |

## 2.7 Color register

The Cuboid contains six small color points (patch B4) for automatic color register measurement.



*In order to measure the color register error, the largest distance between two colors of the color set is calculated.*

*In the accompanying example (left), the greatest distance is between magenta and black.*

For competition categories 1, 2, 3, 4 and 5:

| <i>The largest color register deviation between two color</i> | <i>Points per evaluation</i> |
|---|------------------------------|
| <i>Less than or equal to 200 <math>\mu</math>m (0.20 mm)</i>  | <i>30</i>                    |
| <i>More than 200 <math>\mu</math>m (0.20 mm)</i>              | <i>0</i>                     |

## 2.8 General Print Quality (GPQ)

Each participating title will be evaluated as below,

- Two random publication days out of 5 are chosen for GPQ evaluation .
- Each day is evaluated on first 16 color pages or 16 spreads (for magazine & tabloids). If, any day's publication fails to meet 16-page color, other random day will be considered to meet 16 color pages
- Each participant starts with 576 points (2 Days X 288 points) and points are deducted for each of the print quality defects (up to 18 as defined in table 2.8) observed in a page. Each defect criterion is applied only once in a page. For example, even though "printed plate edges" defect is visible many times in a page, only once deducted per page.

### *Broadsheet Newspapers:*

The first 16 four-color pages of the main product. One 1 point will be deducted for each print defect (up to 18 defects possible) on every single page, leading to a maximum loss of all points (2 edition X 16 pages x 18 points = 576).

### *Magazines & Tabloids:*

As the size of magazines and tabloids are small, spread (pairing page) will be considered equal to one page. The first 16 four-color spreads (32 pages) of the main product will be evaluated for GPQ. So, will deduct 0.5 points for each print defect on every single page (1 point for a spread page) of magazine and tabloid products. So, a total of 64 pages (2 editions x 32 pages) are evaluated. A maximum of 18 points can be subtracted in every spread, leading to a maximum loss of all points (32 spreads x 18 points = 576).

The jury responsible for evaluating the general printing quality will do so from an **"expert's point of view"** and the decision of jury is final.

**Table 2.8,** GPQ Quality defects list

| Evaluation criteria       |    |   | Points deducted per two-page spread |
|---------------------------|----|---|-------------------------------------|
| Category                  | No | Detected deficiencies   |                                     |
| Printing process          | 1  | Over inking or under inking, density fluctuations               | 1                                   |
|                           | 2  | Disturbing strike-through, print-through                        | 1                                   |
| Color register            | 3  | Disturbing mis-register   | 1                                   |
| Mechanical print quality  | 4  | Disturbing set-off  | 1                                   |
|                           | 5  | Impressions from draw rollers, path rollers                     | 1                                   |
|                           | 6  | Dirt stains, fingerprint marks                                  | 1                                   |
|                           | 7  | Printing plate edges  | 1                                   |
|                           | 8  | Printing plate scratches  | 1                                   |
|                           | 9  | Poor lateral register, poor ribbon register                     | 1                                   |
|                           | 10 | Disturbing toning   | 1                                   |
|                           | 11 | Paper wrinkles / Creasing                                       | 1                                   |
|                           | 12 | Hickeys / Picking (Fluff accumulation)                          | 1                                   |
|                           | 13 | Pin holes in image area   | 1                                   |
|                           | 14 | Slur / Doubling   | 1                                   |
| Image and graphic quality | 15 | Deficient sharpness, low resolution, moiré                      | 1                                   |
|                           | 16 | Color cast  | 1                                   |
|                           | 17 | Deficient contrast, brightness                                  | 1                                   |
|                           | 18 | Deficient tonal reproduction (Flat, missing highlight / shadow) | 1                                   |
| Total                     |    |   | 18                                  |

**Shipment address and instruction for shipping:**

Please send your publication copies to the below address (**exactly as written below with email id**)

**WAN-IFRA South Asia Pvt Ltd**  
**RMTC Division, C/O PII RIND**  
**2<sup>nd</sup> main, CPT Campus, Taramani,**  
**Chennai 600113, Tamil Nadu, India**  
**Landmark: Asian college of journalism**  
**Mob: +91.8792178292**  
**+91.7358299188**

Details about the address  
**Company Name:** WAN-IFRA South Asia  
**Department:** RMTC  
**Street Name / Area:** 2<sup>nd</sup> Main, CPT campus  
**City:** Chennai,  
**Postal / Zip code:** 600113  
**State:** Tamil Nadu  
**Country:** India

Note: **Annexures 1 & 2** (given in **page 21 & 22**) are mandatory.

**Annexure 1:** (Participant outside India only) Must be filled (handwritten) and **pasted outside the package** (should not insert inside the package). If Annexure 1 is not attached with package, customs will delay the clearance and may impose additional duty. This fee should be paid by the shipper if annexure 1 is not attached. Provide the invoice to the shipping company to clear the customs at ease.

**Annexure 2: (For all)** must be filled & attached inside your package, which contains publication copies. Should keep multiple sheets if multiple editions days are sent.

**N.B.**

Despite every effort to ensure correct calculations, errors or faults cannot be excluded.

Please note the date of the instructions at the bottom of each page, as up to the start of the competition minor changes are possible. We remain at your disposal for all queries or individual advice.

Yours sincerely,

**Prabhu Natrajan**

Research Manager

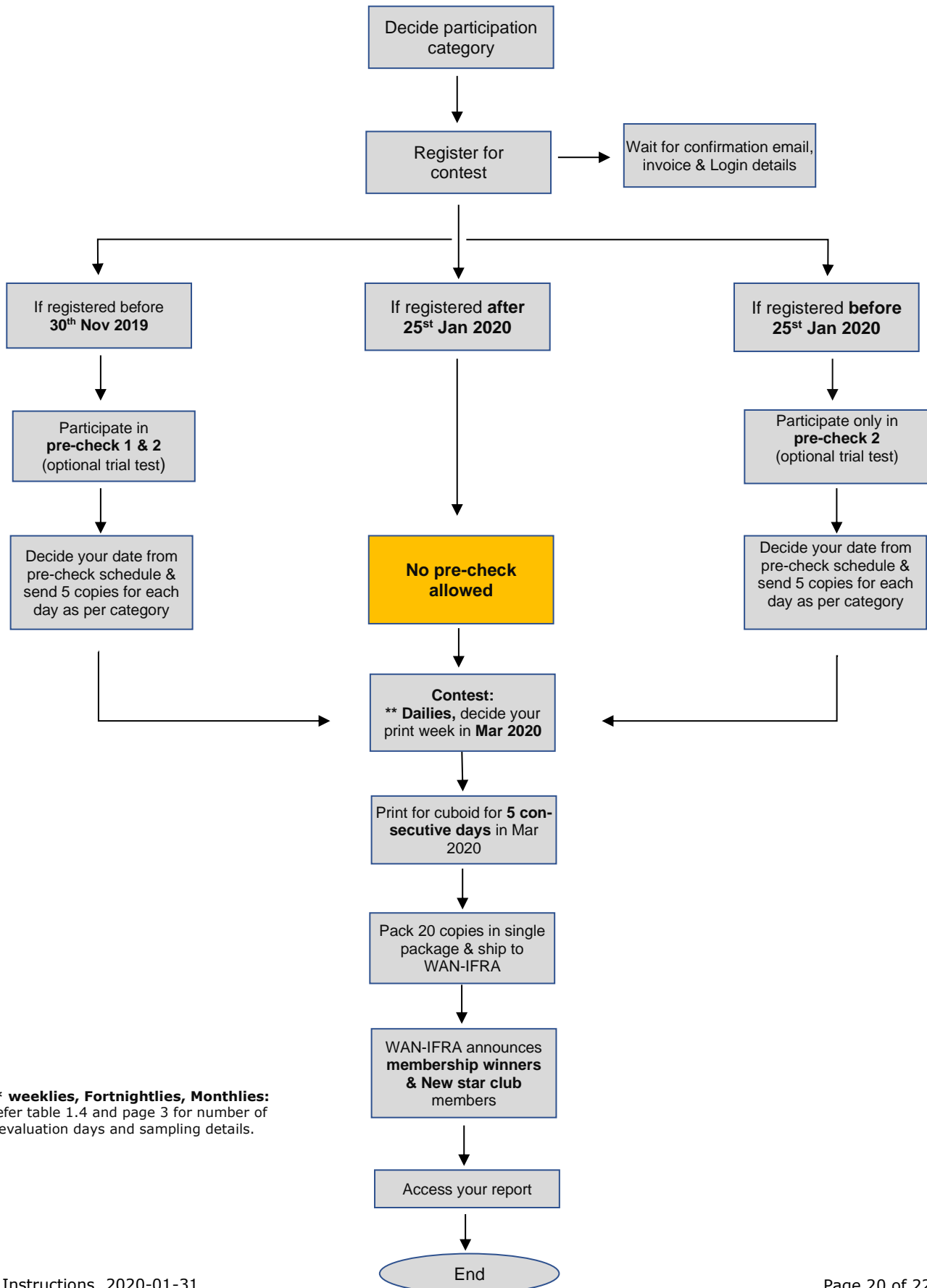
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E-Mail : [prabhu.n@wan-ifra.org](mailto:prabhu.n@wan-ifra.org)

### Contest procedure Workflow



**\*\* weeklies, Fortnightlies, Monthlies:**  
Refer table 1.4 and page 3 for number of evaluation days and sampling details.

**Annex 1: Declaration letter for Customs**

Date: \_\_\_\_\_

**Declaration**

To Whomsoever It May Concern:

In this package, we are sending \_\_\_\_\_ number of copies of our Newspaper / magazine publication \_\_\_\_\_ of issue dated \_\_\_\_\_. Worth of the material is less than or equals € / \$ / ₹. \_\_\_\_\_ This package **doesn't attract any high commercial value** and shipping it to the following address **for evaluation and study purpose only:**

**WAN-IFRA South Asia Pvt Ltd,**  
RMTC Division, C/O PII-RIND,  
2<sup>nd</sup> main, CPT campus, Taramani,  
Chennai 600113, Tamil Nadu, India  
Tel: +91.44.4211 0640  
Fax: +91.44.2435 9744

Kindly clear the customs at the earliest.

Yours truly,

\_\_\_\_\_  
Name / Signature of the person responsible

\_\_\_\_\_  
Designation

\_\_\_\_\_  
Company Seal

**Annex 2: Leaflet for Cuboid identification**

Please insert the completed leaflet inside the package

|                          |  |
|--------------------------|--|
| Competition month        |  |
| Publication title        |  |
| Technical category (1-5) |  |
| Company name             |  |
| Printing site            |  |
| Country                  |  |
| Cuboid on page           |  |