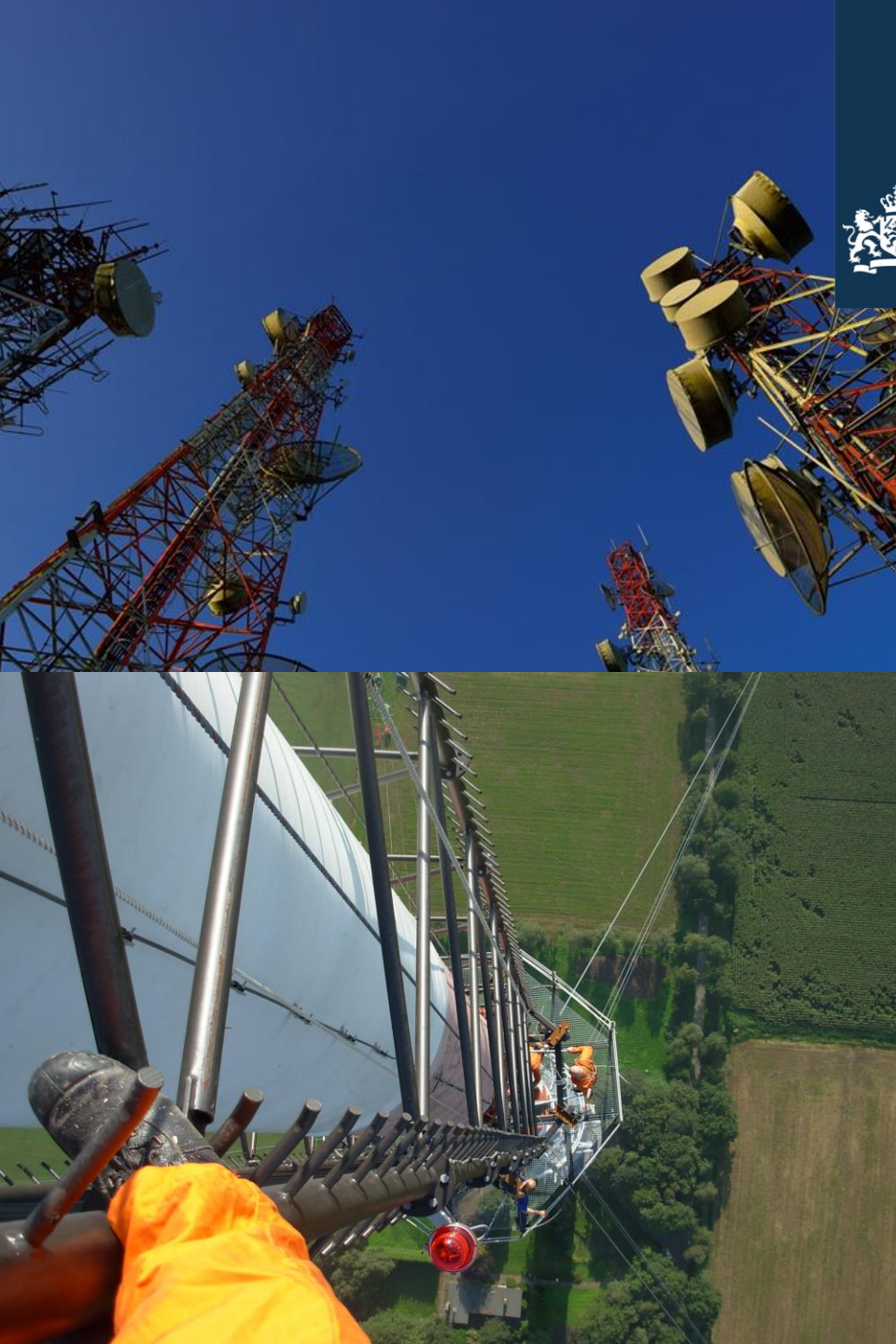




Radiocommunication Agency  
Netherlands

# **switch over in the Netherlands**

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# contents

- ❖ *pre switch-over phase*
- ❖ *switch over*
- ❖ *post switch-over phase*



# pre switch over

- analogue TV-plan: Stockholm,  
26 May – 22 June 1961
- 3 country wide TV coverage's
- political wish for competitor to cable





# pre switch-over

## ➤ ***political wish for competitor to cable***

- 2001: request for interest to Digital TV (*commercial*)
  - only 1 reply
- 2002, February:
  - Digitenne gets a license for commercial TV;
  - NOS (national public operator) is 2<sup>nd</sup> licensee;
    - expire dates: January 2017
- 2003, April:
  - roll out start: (Randstad area):
  - content: 21 TV and 16 Radio programmes



# switch-over process

## ➤ ***phase 1: 2003***

- as a result of the coordination negotiations
  - 3 multiplexes next to 3 analogue transmitters
- 'massive' publication via hourly advertising and 'banners' on the wireless TV programmes
- no subsidising setup box purchases
- prepared to repair unwanted (in home) cable interference



# regional approach

- ✓ Chester '97 (CEPT): technical criteria, coordination principals and procedures
  
- ✓ RRC-2004 (ITU):
  - Preparatory Conference:
    - "Intersessional Planning Group" (IPG): develop draft plans;
    - "Planning eXercise Team" (PXT): planning exercises;
    - "Regulatory / Procedural Group" (RPG): regulatory and procedural issues.
  
- ✓ RRC-2006 (ITU): Regional Radio Conference on the Revision of the Stockholm agreement





# national switch-over

## ➤ *parliament approved plan:*

- 2006: no simulcast period
- 2006, December 11/12: **01.00**:
  - ❖ switch off all analogue transmitters
  - ❖ switch on all digital transmitters,
    - but:
      - ❖ based on roof top;
      - ❖ no 100% coverage!



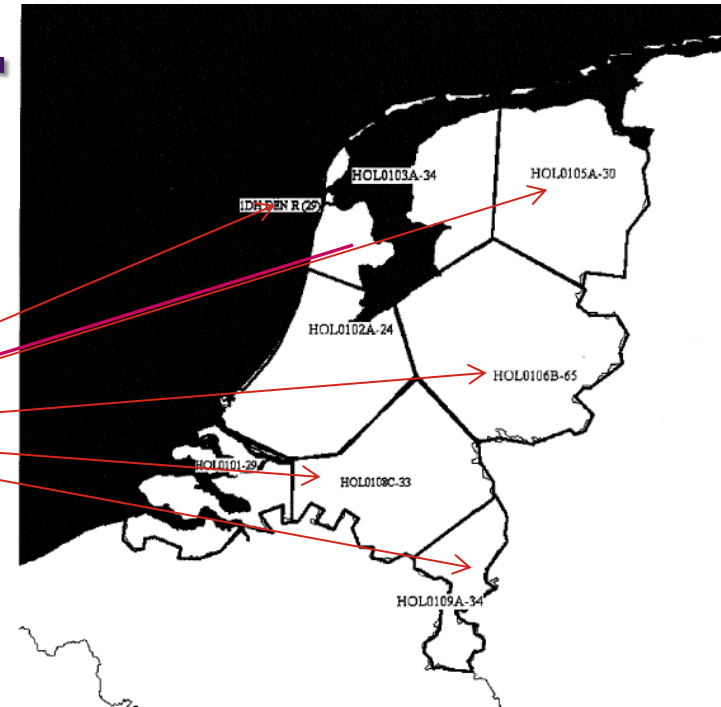


# national switch-over

license conditions:

Channel arrangements

Reception and power specifications



Allotments behorend bij layer 1 in tabelvorm (tabel 1)

| Allotment | Regio                 | RPC/RN | Kanaal | MHz     |
|-----------|-----------------------|--------|--------|---------|
| HOL0102A  | Randstad              | 2/1    | 24     | 494-502 |
| HOL0101   | Zeeland               | 2/1    | 29     | 534-542 |
| 1DH DEN R | Den Helder            |        | 29     | 534-542 |
| HOL0105A  | Groningen-Drenthe     | 2/1    | 30     | 542-550 |
| HOL0108C  | Brabant Oost          | 2/1    | 33     | 566-574 |
| HOL0103A  | IJsselmeer            | 2/1    | 34     | 574-582 |
| HOL0109A  | Limburg Zuid          | 2/1    | 34     | 574-582 |
| HOL0106B  | Overijssel-Gelderland | 2/1    | 65     | 822-830 |



# national switch-over (roadmap)

| Zendstation    | Geschatte<br>indienstname<br>datum** | Adres                   | Postcode | Kanaal Net 1 | Kanaal Net 2 | Kanaal Net 3 | Kanaal Net 4 | Publieke laag |
|----------------|--------------------------------------|-------------------------|----------|--------------|--------------|--------------|--------------|---------------|
| Nijmegen       | 11-dec-06                            | Weurtseweg 460          | 6541BE   | 60           | 33           | 31           | 56           | 42            |
| Eindhoven 2    | 11-dec-06                            | Daalakkersweg 22        | 5641 JA  | 60           | 33           | 31           | 56           | 30            |
| Smilde         | 18-dec-06                            | Van Veenstraat Oost 26  | 9423 VB  | 30           | 25           | 54           | 33           | 60            |
| Oss Gelderland | 16-jan-07                            | Aengelbertlaan to nr 50 | 5342 LA  |              |              |              |              | 42            |
| Oss Brabant    | 16-jan-07                            | Aengelbertlaan to nr 50 | 5342 LA  | 60           | 33           | 31           | 56           | 30            |
| Alkmaar        | 22-jan-07                            | Koelmalaan 350          | 1812 PS  | 34           | 44           | 45           | 35           | 39            |
| Zwolle         | 29-jan-07                            | Telfordstraat 1         | 8013 RM  | 65           | 28           | 23           | 47           | 22            |
| Goes           | 5-feb-07                             | Cornelisweg 10          | 4463 AK  | 29           | 35           | 48           | 32***        | 54            |
| Groningen      | 5-feb-07                             | Gideonweg zuid          | 9723 BM  | 30           | 25           | 54           | 33           | 66            |
| Heerlen        | 5-feb-07                             | de Beitel 70            | 6422 PB  | 27           | 34           | 24           | 64           | 54            |
| Lelystad       | 12-feb-07                            | Oostvaardersdijk 2      | 8243 PA  | 65           | 44           | 23           | 47           | 26            |
| Leeuwarden     | 12-feb-07                            | Ceresweg 20             | 8938 BG  | 34           | 44           | 55           | 21           | 32            |
| Hengelo        | 19-feb-07                            | Hazeweg 25              | 7556 BM  | 65           | 28           | 23           | 47           | 22            |
| Apeldoorn      | 5-mrt-07                             | J.C. Wilsaan            | 7313*    | 65           | 28           | 58           | 66           | 42            |
| Maastricht     | 14-mrt-07                            | Trichterbaan 170        | 6215 XZ  | 27           | 34           | 24           | 64           | 54            |
| Breda          | 19-mrt-07                            | Steenen Hoofd           | 4825*    | 60           | 33           | 31           | 32***        | 30            |
| Den Helder     | 26-mrt-07                            | Havenweg (Binnenhaven)  |          | 29           | 31           | 37***        | 43           | 39            |
| Arnhem         | 16-apr-07                            | Utrechtseweg 310        | 6812 AR  | 65           | 28           | 58           | 66           | 42            |
| Venlo          | 23-jul-07                            | Grenspost noord A67     | 5916*    | 60           | 34           | 31           | 56           | 54            |
| Den Bosch      | 6-aug-07                             | Graaf van Solmsweg      | 5221*    | 60           | 33           | 31           | 56           | 30            |
| Doetinchem     | 17-dec-07                            | Roerstraat              | 7005*    | 65           | 28           | 58           | 66           | 42            |
| Eindhoven1     | 17-dec-07                            | Croy 17 c               | 5653*    | 60           | 33           | 31           | 56           | 30            |

per nov 06 vrijwel zekere planning

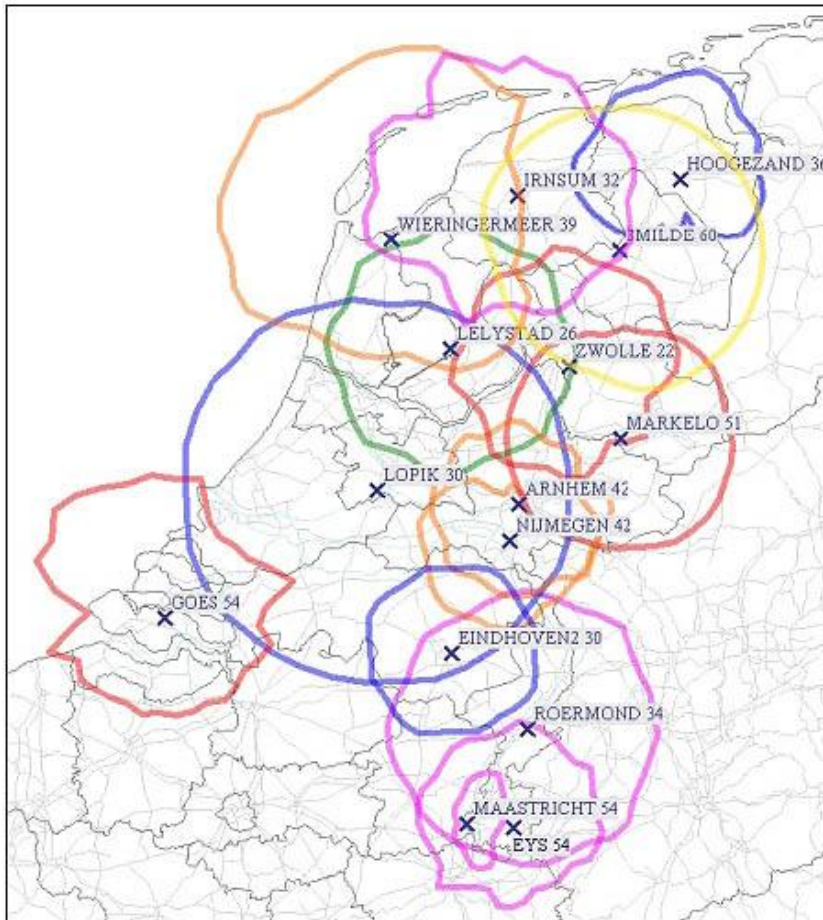
\*: definitieve postcode nog niet bekend.

\*\* : het betreft een inschatting.

\*\*\*: frequentie tijdelijk in gebruik. Den Helder ch. 37 vervangt ch. 48 en Breda en Goes ch. 32 vervangt ch. 67



# national witch-over (public program 1)





# post switch-over

## ➤ ***change of settings (national):***

- 2006: KPN takes over Digitenne;
- 2007: DVB-H fails to become a success;
- 2007: Cable goes digital;
- 2007: growing interest in DTT (mainly as an add-on)
- 2014: KPN changes business policy
- 2017: *(end of license period) future ??*



***Thank you very much  
for  
your attentions***

***questions?***