

Point sur le déploiement d'EGNOS pour la DGAC

21 Avril 16



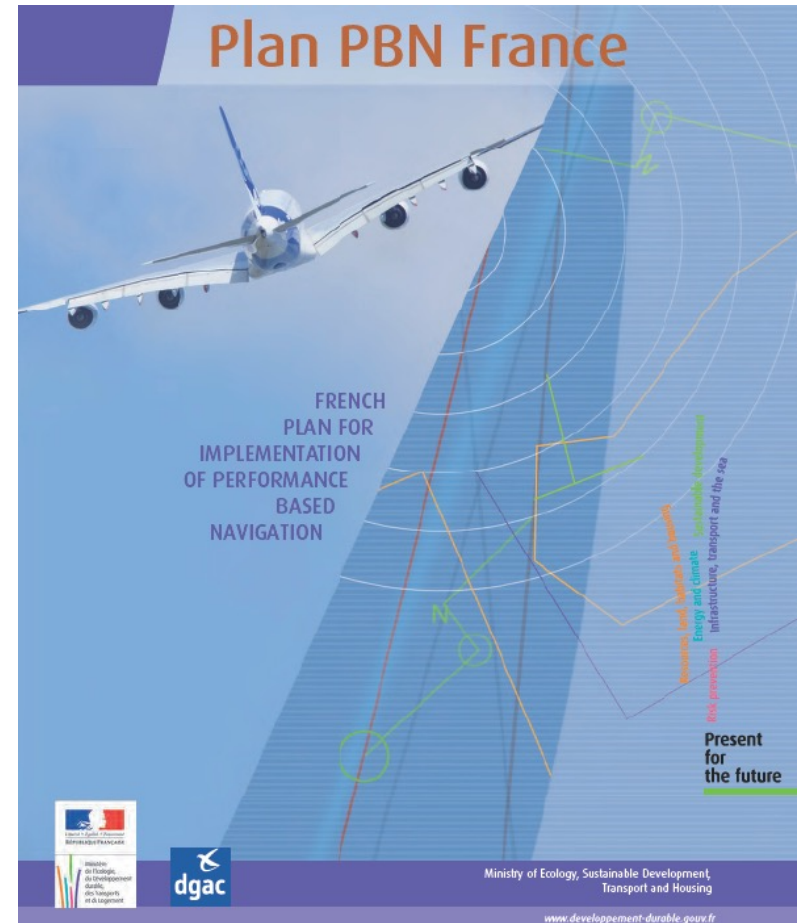
D S N A

Direction générale de l'Aviation civile

Ministère de l'Écologie, du Développement durable, et de l'Énergie

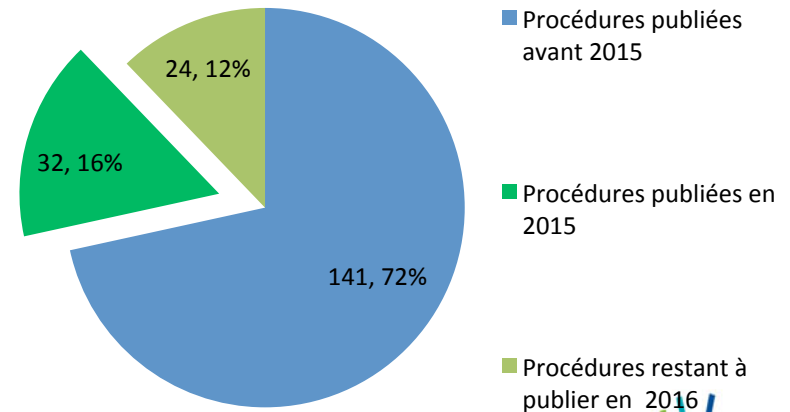
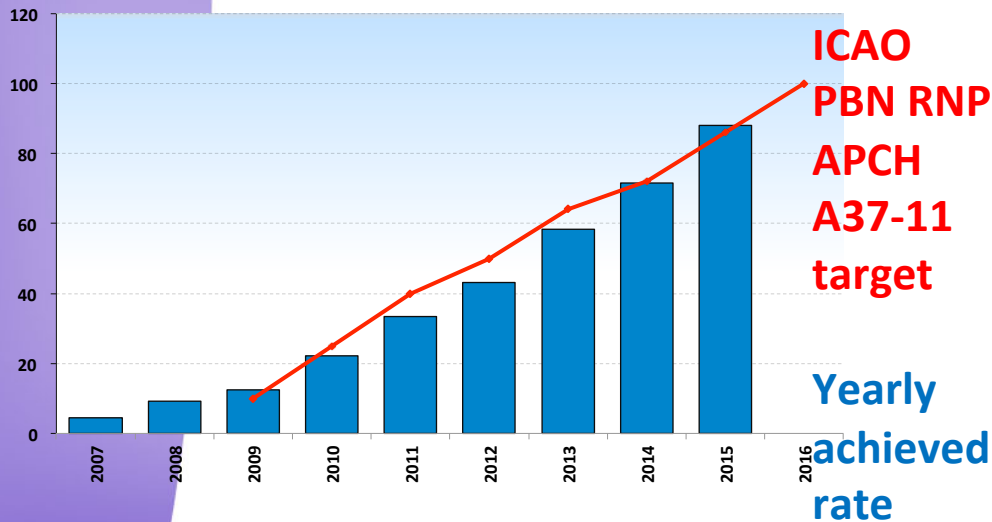
PLAN PERFORMANCE BASED NAVIGATION (PBN)

- **ICAO directions towards Performance Based Navigation implementation**
 - Improve Safety and Airspace Capacity, Reduction of Environmental impact
 - ICAO ASBUs
- **European environment**
 - SESAR
 - FABEC
- **Airspace users consultation**
 - PBN National implementation plan
 - Open PBN forum with airspace users and airports
- **GNSS systems strategy**
 - EGNOS is an important system within the PBN plan



PBN APPROACHES STATUS

- Approx. **200 runway ends** included in France **PBN plan**
- GPS implemented since 2004, EGNOS since 2011, GPS + barometric vertical guidance since 2012



■ résultat —● cible 7.0.1



PUBLISHED PBN PROCEDURES

ETUDES PUBLIEES à l'AIP | Date : 1 JANVIER 2016 - Cycle 02/16

NPA : approche GNSS (minima LNAV)
APV SBAS ou Baro : approche avec guidage vertical (minima LPV ou LNAV/NAV)

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OUTRE-MER

MIQUELON NPA 12
MIQUELON NPA 30
SAINT PIERRE NPA 08
SAINT PIERRE NPA 26

BORA BORA NPA 11
BORA BORA NPA 29
FAKARAVA NPA 05
FAKARAVA NPA 23
HAO NPA 12

HAO NPA 30
HIVA OA NPA 02
HIVA OA NPA 20

HUAHINE NPA 07
HUAHINE NPA 25
NUKU HIVA NPA 06

RAIATEA NPA 07
RAIATEA NPA 25
RANGIROA NPA 09

RANGIROA NPA 27
TAHITI Baro 04
TAHITI Baro 22

TUBUAI NPA 03
TUBUAI NPA 21

* MARIE GALANTE NPA 09
* POINTE A PITRE NPA 12
* POINTE A PITRE NPA 30
* MARTINIQUE NPA 10
* MARTINIQUE NPA 28

* CAYENNE NPA 08
* CAYENNE NPA 26

* DZAOUZDI Baro 16
* DZAOUZDI Baro 34

* LA REUNION NPA 12
* LA REUNION Baro 14
* LA REUNION Baro 30
* ST PIERRE Baro 15

NOUMEA LA TONTOUTA NPA 11
NOUMEA LA TONTOUTA NPA 29



SNA OUEST

ANGERS SBAS 26
BREST SBAS+Baro 07R
BREST Baro 25L
CAEN NPA 13
CAEN SBAS+Baro 31
CHOLET SBAS 21
* DEAUVILLE NPA 12
DEAUVILLE SBAS+Baro 30
* DINARD SBAS+Baro 17
* DINARD SBAS+Baro 35
ILE D'YEU NPA 14
ILE D'YEU NPA 32
LANNION SBAS+Baro 29
LAVAL NPA 32
LA ROCHE SUR YON NPA 10
LA ROCHE SUR YON SBAS 28
* LE HAVRE NPA 04
LE HAVRE SBAS+Baro 22
* LE MANS SBAS 02
LE MANS NPA 20
(LORIENT NPA 07)
MORLAIX NPA 04
MORLAIX NPA 22
NANTES SBAS+Baro 03
NANTES NPA 21
OUESSANT SBAS 05
OUESSANT SBAS 23
QUIMPER SBAS+Baro 28
RENNES SBAS+Baro 10
RENNES SBAS+Baro 28
* SAINT BRIEUC SBAS+Baro 26
SAINT NAZAIRE SBAS+Baro 26
* VANNES NPA 04
* VANNES SBAS 22

SNA SUD-OUEST

AUCH SBAS 18
AUCH SBAS 36
BERGERAC SBAS+Baro 10
BERGERAC SBAS+Baro 28
* BIARRITZ Baro 09
BIARRITZ SBAS+Baro 27
BISCARROSSE NPA 27
* BORDEAUX SBAS+Baro 05
* BORDEAUX SBAS+Baro 11
* BORDEAUX SBAS 23
CHATEAUX-NEUF SBAS+Baro 21
* LA ROCHELLE SBAS 27
NIORT NPA 25
* PAU SBAS 31
PERIGUEUX SBAS+Baro 29
* ROYAN SBAS 28

SNA SUD

AGEN SBAS 29
* ANGOULEME SBAS 28
* ANGOULEME SBAS 28 HEL
BRIVE SBAS 11
BRIVE SBAS 29
CARCASSONNE SBAS+Baro 10
CASTRES SBAS 14
* LIMOGES SBAS 03
* LIMOGES SBAS 21
* MONTLUCON SBAS 17
MURET SBAS 12
POTIERS SBAS+Baro 03
POTIERS SBAS+Baro 21
* RODEZ SBAS 13
RODEZ SBAS 31
TARBES SBAS 20
TOULOUSE SBAS+Baro 14L
TOULOUSE SBAS+Baro 14R
TOULOUSE SBAS+Baro 32L
TOULOUSE SBAS+Baro 32R

SNA RP

LE BOURGET SBAS 07
LE BOURGET NPA 25
LE BOURGET SBAS 27
PARIS ORLY SBAS+Baro 02
PARIS ORLY SBAS+Baro 06
PARIS ORLY SBAS+Baro 08
PARIS ORLY Baro 20
PARIS ORLY SBAS+Baro 24
PARIS ORLY SBAS+Baro 26
PONTISE SBAS+Baro 05
PONTISE SBAS+Baro 23
* TOUSSUS NPA 07L

SNA NORD

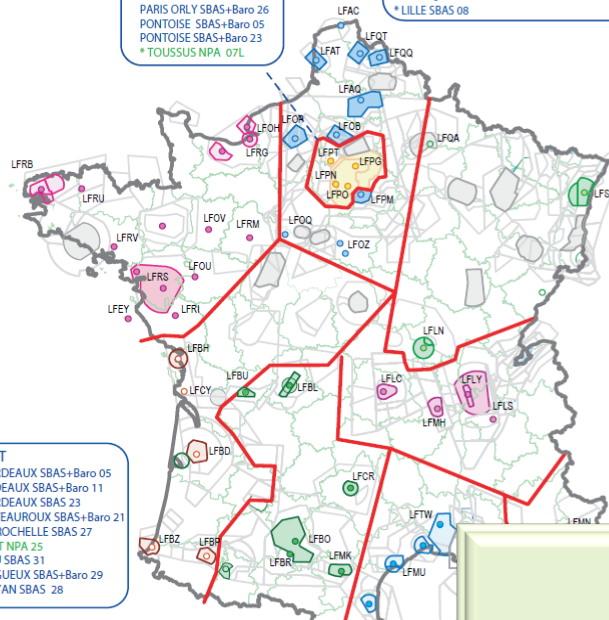
* ALBERT BRAY SBAS 09
AMIENS SBAS 30
AUXERRE SBAS 01
AUXERRE SBAS 19
* BEAUVAIS SBAS 12
BLOIS NPA 30
* CALAIS SBAS 24
* LE TOUQUET SBAS 13
* LILLE SBAS 08
* MELUN SBAS 28
* MERVILLE SBAS 04
ORLEANS SBAS 05
ORLEANS SBAS 23
* ROUEN NPA 22
* VALENCIENNES SBAS 11
* VALENCIENNES SBAS 29

SNA NORD-EST

BÂLE-MULHOUSE SBAS 15
BÂLE-MULHOUSE SBAS 33
BESANCON SBAS 23
CHALON CHAMPFORGEUIL NPA 35
BESANCON NPA 23 HEL
CHAMBLEY NPA 23
COLMAR SBAS 01
COLMAR SBAS 19
DOLE SBAS 05
EPINAL SBAS 26
METZ-NANCY-LORRAINE SBAS+Baro 04
METZ-NANCY-LORRAINE SBAS 22
* MONTBELIARD NPA 26
* NANCY SBAS 03
NEVERS SBAS 30
REIMS SBAS 07
REIMS NPA 25
STRASBOURG SBAS 05
STRASBOURG SBAS 23
* ST YAN NPA 15L
* ST YAN NPA 33R

SNA CENTRE-EST

ANNECY SBAS+Baro 04
* AURILLAC SBAS 15
* CLERMONT SBAS 26
* GRENOBLE SBAS 27
* LE PUY SBAS 15
* LE PUY SBAS 33
LYON BRON SBAS+Baro 16
LYON BRON SBAS+Baro 34
LYON ST EXUPERY SBAS+Baro 18R
LYON ST EXUPERY SBAS+Baro 18L
LYON ST EXUPERY SBAS+Baro 36R
LYON ST EXUPERY SBAS+Baro 36L
MOULIN SBAS 26
ROANNE NPA 20
SAINT ETIENNE SBAS+Baro 18
* SAINT ETIENNE NPA 36
VALENCE SBAS 01
* VICHY SBAS 01



Status Jan 2016

173 PBN Runways

- 168 GPS
- 120 EGNOS
- 59 GPS + Baro

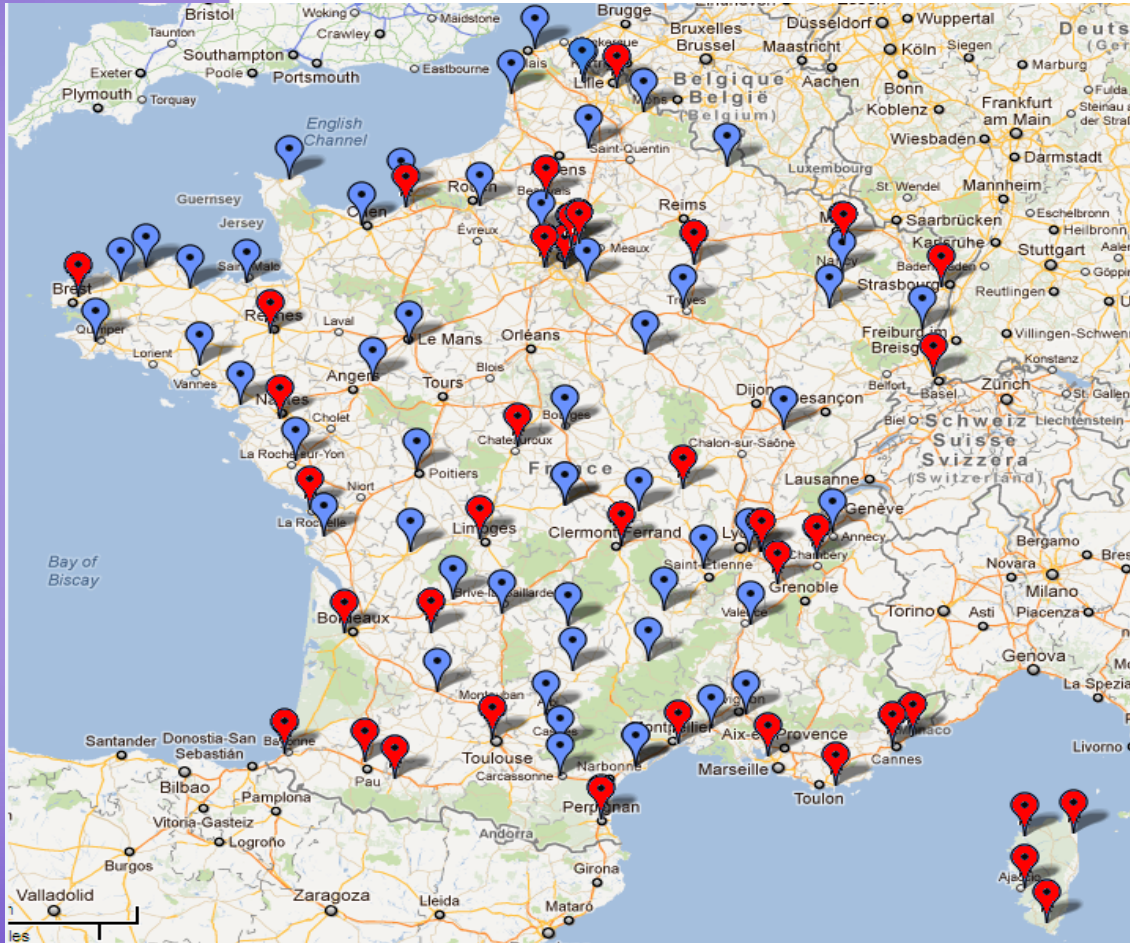
* participation du BPS



DSNA

Ministère de l'Écologie, du Développement durable, et de l'Énergie

Instrument Landing System rationalisation plan



2016: ILS reduced network

2016: Airports where the existing ILS Cat I is proposed to be replaced by a PBN approach

**About 5 M€ yearly savings
Contributes to the French
Landing Tax reduction program:**

2018 : 225,50 €

2017 : 224,45 €

2016 : 227,1 €

2015 : 228,62 €

2014 : 233,23 €

