

The main title of the document is "ARS DEVELOPS STEP TO PREDICT HOSPITAL BED SATURATION". It is written in large, bold, white, uppercase letters and is centered on a dark blue background that features a blurred image of a person's hand holding a medical device. A thin blue line graphic curves around the text.

In partnership with Capgemini, ARS (Agence Régionale de Santé) Regional Health Agency has implemented an innovative tool to improve the management of hospital capacity in times of the COVID-19 pandemic and support decision-making in everyday health care

STRIKING THE OPTIMAL BALANCE BETWEEN SCHEDULED AND UN-SCHEDULED CARE

Over the last two years, hospitals of the Île-De-France Regional Health Agency (ARS) have struggled with trading-off between scheduled care, such as planned hospital procedures, and unscheduled emergencies directed to critical care units. As a completely new pathology, COVID-19 has increased the uncertainty as to how many programmed procedures can be rescheduled to accommodate the rise in unplanned hospital stays. Hence, striking an optimal balance between these two often equally urgent categories has become even more critical.

Client: ARS Île-de-France



Capgemini The Capgemini Invent logo features the word "Capgemini" in a blue, sans-serif font, followed by the word "invent" in a smaller, lowercase, blue, sans-serif font. A blue diamond-shaped icon is positioned between the two words.

Industry: Public Sector

Client Challenges:

ARS wanted to better manage bed capacity and balance scheduled and unscheduled care during periods of uncertainty such as the COVID-19 crisis.

Solution:

Working with Capgemini Invent, ARS has developed STEP, a predictive, decision-supportive, and policy impact evaluation tool that is used to monitor the COVID-19 bed capacity situation of hospitals in the region.



Emergency teams must deal with constraints. We try to make trade-offs between these two categories [scheduled and unscheduled care], involving patients who need care at various levels of urgency.”

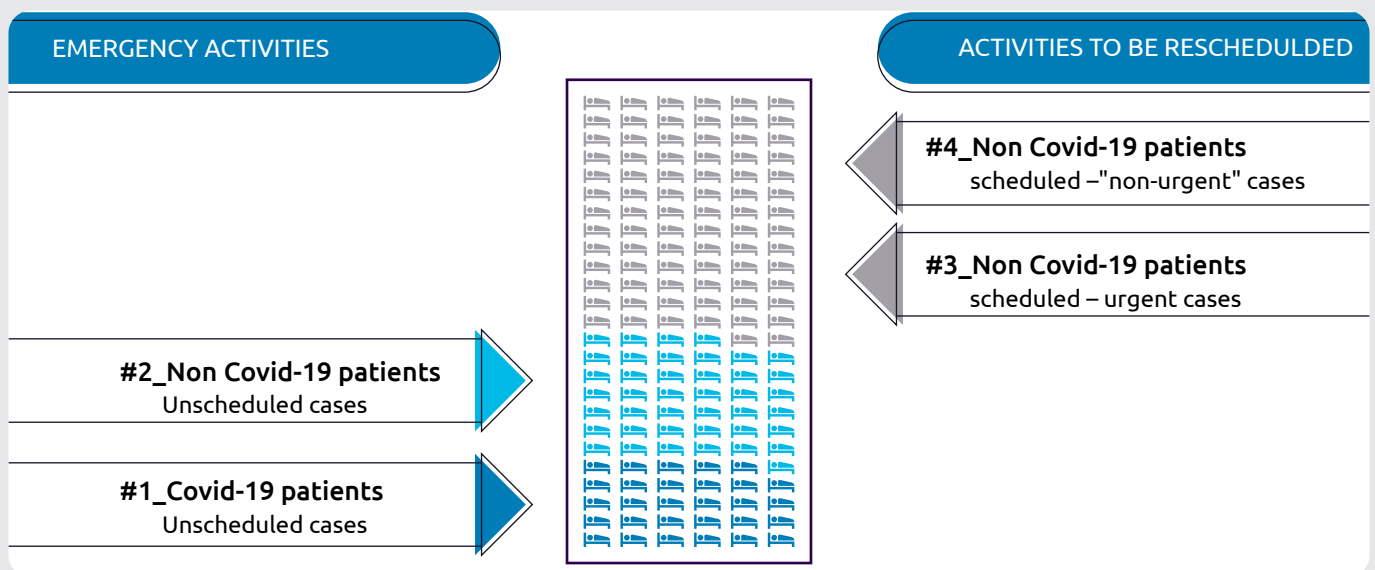
ROMAIN HELLMANN, MD

Emergency department, AP-HP Nord
Head of the Critical Care department at Regional Health Agency of Ile de France (ARS – Agence régionale de Santé)
CEO’s medical advisor for emergency at Regional Health Agency of Ile de France (ARS – Agence régionale de Santé)

MONITORING OCCUPANCY LEVELS WITH STEP

In order to help healthcare providers treat many patients while maintaining occupancy levels below critical thresholds, Capgemini Invent and ARS have developed STEP, the Saturation Bed Anticipation tool.

STEP is an innovative predictive instrument designed to improve hospital capacity management at both regional and departmental levels by predicting the number of beds needed and hospital saturation. This included how many beds are available in critical care as well as for conventional hospitalization (medical and surgical). It also helps arbitrate between COVID-19 and Non-COVID-19 beds while maintaining a minimum number of available beds for patients affected by the pandemic.





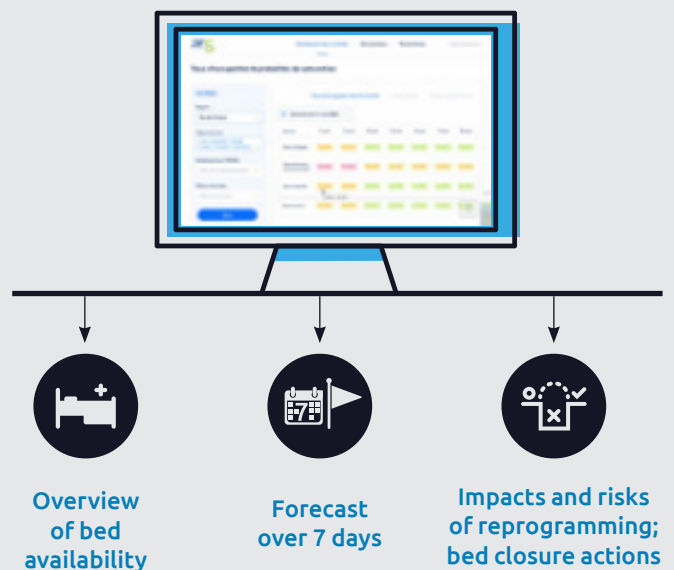
STEP USE CASES

So far ARS has applied STEP in a variety of ways. The solution has helped the agency to identify the departments and hospitals that are currently at risk of capacity oversaturation. In addition, ARS can now simulate future scenarios based on key parameters such as reproduction number, level of planned and unplanned activities, number of beds at the regional or department level, number of employees on holiday, and the impact of seasonal influenza. Finally, the organization uses STEP to analyze patient flow, detect possible discrepancies, and then share them with the parties involved.

In this way, STEP enables decision-makers in the healthcare sector to have a clear vision on the current situation and capture both present and future epidemic trends. This in turn allows them to proactively respond to the COVID-19 crisis.

At present, ARS and Capgemini Invent are also working on a new feature of STEP that will assess the impact of public policy measures such as lockdowns and suggest ad-hoc strategies for reprogramming hospital activity.

FUNCTIONALITIES



In this COVID-19 crisis, our ability to save lives highly depends on our ability to predict.”

ARNAUD FOUCRIER, MD

ICU, AP-HP Nord

CEO’s medical advisor for critical care at Regional Health Agency of Ile de France (ARS – Agence régionale de Santé)

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I want to emphasize how well our teams mingle and collaborate in this joint effort. In this taskforce, everyone shows dedication and works in an agile and smooth way.”

VIRGINIE LAM

Director at Capgemini Invent

A MULTIDISCIPLINARY PARTNERSHIP FOR SAVING LIVES

The STEP project connects people and expertise to navigate in complex ecosystems. In this partnership, everyone comes from a different background and offers insight from a variety of perspectives, such as from doctors, epidemiologists, consultants, and data scientists.

Out of this joint effort, ARS and Capgemini Invent have managed to delineate drivers for decision-makers, allocate the most adequate level of resources, and provide the right amount of effort. STEP enables doctors and nurses to plan ahead and be there at the right moment, saving not only time and energies but possibly also lives.

CONTACTS



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About

Capgemini invent

As the digital innovation, consulting and transformation brand of the Capgemini Group, Capgemini Invent helps CxOs envision and build what’s next for their organizations. Located in more than 30 offices and 25 creative studios around the world, its 7,000+ strong team combines strategy, technology, data science and creative design with deep industry expertise and insights, to develop new digital solutions and business models of the future.

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About



The mission of the Regional Health Agency Ile-de-France is to implement health policy in the region. It is competent in the field of health as a whole, from prevention to care and medical and social support. Its organization is based on a health project developed in consultation with all professionals and users, in a concern for efficiency and transparency.