

UPDATE ON THE “NOUVEAU CENTRE”

BACKGROUND

1. In 1972, the 8500 m² tower building opened to host IARC activities. Construction of the tower was funded jointly by the French Government, the Rhône Department and the City of Lyon on land owned by the City of Lyon. The Governments of the United Kingdom of Great Britain and Northern Ireland and the United States of America had contributed generously to the provision of technical equipment and the Governments of Australia and the Netherlands had kindly furnished the delegates' lounges and the restaurant respectively (Annual report covering the years 1972–1973 refers).
2. Reflecting expansion of IARC activities, three additional structures were later built on the compound. The Biological Resources Centre (BRC) and Latarjet buildings were built with funding made available by the Governing Council (GC); and the Sasakawa Memorial Hall (including the Princess Takamatsu Hall) was built thanks to a generous donation from the Japan Shipbuilding Industry Foundation. This resulted in the current footprint of 10 200 m².
3. Since 2008, several technical reports revealed the poor state of the tower building infrastructure. In 2012, all local partners and the GC recognized that the state of the tower's infrastructure was such that it would no longer be viable for continued use by the Agency within a period of five to seven years. Presented with various potential options for long-term continuation of IARC's Headquarters in Lyon, the GC agreed with the recommendation made by the local authorities for a move to a newly built structure on new land for a “Nouveau Centre”.
4. Throughout the process of reviewing the options for IARC's Headquarters, the Secretariat benefitted from strong support and collaboration from the local partners which include the City of Lyon, Métropole de Lyon (formerly called “Grand Lyon”), the Rhône Department and Auvergne-Rhône-Alpes Region (formerly called “Rhône-Alpes Region”), as well as the local Government representation, the Auvergne-Rhône-Alpes Prefecture. Clear statements of intent to continue to host the Agency have also been issued at the highest level of the French Government and reiterated at the GC by the French Representative.

STATE OF THE TOWER

5. Since 2012, the City of Lyon has invested in a programme of urgent repair works for the tower building (ventilation, air-conditioning and heating systems) in order to ensure occupancy for five to seven years. Despite these concentrated efforts, the state of the building remains a major concern and continues to cause unanticipated interruptions in the Agency's work. During 2018 noteworthy incidents included: significant leaks and infiltration of rain water in

offices, laboratories and biobank rooms during thunderstorms; multiple failures in the elevator system; continued burst of pipes in the aging piping network throughout the Tower; a significant leak in the central heating system; and general failure of the fire safety system which led to the evacuation of the Tower for two full working days.

6. As a result of the persistent and substantial problems faced with the daily running of the building, the Secretariat has brought to the attention of the local partners the associated escalating risk which may result in the need to relocate the Agency to alternative premises before completion of the "Nouveau Centre" building. Earlier analyses carried out by the Métropole de Lyon in 2012 estimated the cost of such a relocation at around €28 million for two years.

7. As a mitigation measure and to assess the viability of the current premises for the lifespan of the "Nouveau Centre" building project, the Secretariat requested the City of Lyon to carry out another full technical diagnostic assessment of the Tower's physical and system infrastructure in December 2014. This diagnostic was carried out in December 2015, with a second round in March 2016 which concluded that the City of Lyon would help IARC to ensure the continuity of the Agency's activities by acting upon demand and emergency, without a planned official programme of repair works.

8. Consequently, the City of Lyon agreed to carry out the replacement of one failing heating-air conditioning unit on the first floor of the Tower. However, the initial budget secured by the City of Lyon for the ad-hoc repairs came to an end in June 2018. In order to ensure the continuity of IARC activities, the City of Lyon allocated an additional €240 000 budget for urgent works to be carried out in early 2019.

9. Moreover, with the continuous increase of staff, the buildings have reached their maximum capacity in terms of office space, but also in electricity supply or telephone lines. This situation led to inactivation of some lights in corridors in order to prioritize electricity for computing equipment, or to share telephone lines within offices.

FINANCING THE PROJECT

10. Following the detailed study commissioned by Grand Lyon in 2012–2013, the Secretariat presented to the GC, at its 55th session, a project scope for a new building of 12 685 m² with a cost of €64.5 million. During subsequent discussions with the French Ministries in Paris, a reassessment of the scope in line with French public institutional norms was carried out, resulting in a revised project of 11 060 m² with an estimated cost of €48.3 million. During this process, it was confirmed that the project would be led by the Métropole de Lyon team, under the direction of Mr Gérard Collomb, Mayor of the City of Lyon and President of the Métropole de Lyon at that time. This revised project scope was submitted to the GC at its 56th session in May 2014, when the financing decision from the French Government was still pending.

11. At the end of 2015 the French Government and the local authorities signed a financial agreement confirming the joint financing of the "Nouveau Centre" for the relocation of IARC from the current premises to the Biopôle area of Gerland, on land provided by the City of Lyon¹, with a financial envelope of €48 million divided as follows:

- French Government: €17 million
- Métropole de Lyon: €18 million
- Région Auvergne-Rhône-Alpes: €13 million

12. At the beginning of 2016, while finalizing the definition of the project scope and detailed specifications ("Programmiste" study) which had begun in July 2014, the Métropole de Lyon project team raised the issue that the financial envelope agreed by the French Government and the local authorities would not be sufficient for IARC's requirements. As, the project scope and cost could not be further cut as a reduction of 1625 m² or €16.2 million of cost were already made as a result of the reassessment performed by the French authorities in 2013 (see paragraph 10), additional financing for the project was necessary.

13. To ensure a budgetary buffer, the Secretariat met with Mr Gérard Collomb, President of Métropole de Lyon and Mayor of City of Lyon at that time, in May 2016 and agreed on the proposal to increase the budget of the "Nouveau Centre" project from the current €48 million to up to €49.26 million taking into account part of the value of the future sale of the Latarjet and BRC buildings, owned by IARC, into the project financing to a maximum contribution of €1.26 million. Those buildings were estimated by the City of Lyon to have a potential sale value of €2.5 million. The GC's resolution on the transfer of these buildings to the local authorities and to part finance the "Nouveau Centre" was passed subject to IARC being provided with suitable alternative premises that meet the Agency's requirements and on financial conditions and terms to be agreed between the Secretariat, the host country and the local partners (Resolution [GC/55/R12](#), paragraph 4 refers).

14. Following the financial agreement mentioned above, the IARC Secretariat validated the Nouveau Centre "Programme" (detailed technical and functional specifications) and the Métropole de Lyon launched the bid for the combined design-build contract on 13 May 2016.

15. Nine joint teams submitted their expression of interest. The appointed "first-step" jury met on 4 November 2016, with the Director representing IARC, to select the five best-adapted teams to compete for the project.

16. The five selected teams received the solicitation documents, including the specifications, on 27 January 2017 and submitted their projects at the end of May 2017. The technical assessment of the five competing projects was led by the Métropole de Lyon project team in June and July 2017, including IARC and several other experts in the process.

17. The appointed "second-step" jury met on 7, 10 and 13 November, with the Director representing IARC, to make recommendations on the best suited project.

¹ The land provided by the City of Lyon had been estimated at €13.0 million. The estimated value does not appear in the financial agreement signed by the French authorities.

18. After an 18-month international competitive bidding process for the design and construction of the "Nouveau Centre" (combined design-build contract) the winning team was selected by the Métropole de Lyon on 15 December 2017 (see Annex 1). The team consists of Demathieu Bard (general contractor), Art&Build (architects), Unanime (architects), WSP (design engineering company), and Indiggo (sustainable development engineering company).

19. The selected project offered the best value for money addressing IARC's needs and proposed the most modern and innovative building, which should reach the Silver level of the WELL BUILDING STANDARD, ensuring low energy consumption and align with sustainable development goals for new buildings (see Annex 2 – "Architectural note").

CURRENT SITUATION AND PROJECT TIMELINE

20. The global budget of the project has been revised by the Métropole de Lyon to include the amount of the Design-Build contract, taking account of the latest adjustments in the design of the building and has been increased to €51.6 million; cost increases are subject to discussion between the Métropole de Lyon and the other funding partners.

21. The request for building licence submitted in June 2018 was approved by the French authorities in mid-November 2018. The detailed design studies started in August with input from IARC experts, notably in relation to the specific laboratory plans, and to strict UN security requirements.

22. The Design-Build team requested a five-week delay to finalize the detailed design studies, which were delivered at the end of January 2019.

23. A team composed of the Métropole de Lyon, external experts, and IARC's experts carried out an assessment of the detailed design studies. This assessment highlighted the complexity of the project and pointed out lack of precision in the design. Consequently, the Métropole de Lyon requested the design-build team inter alia: to rework the design, to carry out additional detailed analysis, and to propose more detailed design studies within two to three months.

24. IARC Secretariat, while supporting the decision of the Métropole de Lyon, raised its deep concern regarding additional delays, which might compromise the inauguration of the new building prior to the end of 2021, potentially incurring further costs on IARC in order to maintain the current premises operational beyond 2021.

25. The current project timeline is as follows:

- *Summer 2018–Summer 2019*: design studies and administrative procedures.
- *Summer 2019–Autumn 2021*: building works.
- *Autumn 2021*: IARC works and move (reduced to six weeks instead of three months).
- *December 2021*: opening of the "Nouveau Centre".

26. Aside from the budget adjustments by the Métropole de Lyon mentioned in paragraph 12 above, the finalized "Programmiste" study allowed the Secretariat to assess a better defined cost of the project, which had triggered discussions on whether certain cost elements fall outside of the budget scope under the Métropole de Lyon's responsibility. These include items such as the physical move and installation of all or elements of IARC's operations (e.g. the substantial number

of samples in the biobank, which require specialized transportation), including the purchase, transport and installation of laboratory equipment and benching and the installation of specific security requirements as mandated by the UN Security Standards.

27. Other potential costs associated with the move relate to modernization to ensure the best possible working environment in the new IARC Headquarters. This includes the replacement of some of the oversized or old office furniture, outdated laboratory equipment, as well as auditorium and meeting room video and sound systems. The Agency would also like to take this opportunity to replace old freezers in the biobank and transition to a modern, automated system.

28. During the phase of detailed design studies (September 2018-January 2019) additional adjustments to the project were made, incurring supplementary costs. These adjustments included the addition of removable partitions and half-glass walls in order to let natural light into the offices and corridors.

29. The SC reviewed progress on the "Nouveau Centre" at its 53rd session in January 2017 and supported the proposal of the installation of a fully automated biobank and state-of-the-art IT and laboratory facilities.

30. The additional costs of items outlined in paragraphs 26 and 27 above are estimated at €8.70 million, with a significant portion being costs related to the modernization of the biobank. The Secretariat has identified the following funding to partially cover these costs:

- The Director has put in place a mechanism to set aside €1.5 million from earned overheads over the five-year period of 2015–2019 to partially cover the physical move;
- The City of Lyon might provide an estimated €1.24 million from sales proceeds of the Latarjet and BRC buildings to be utilized to partially cover office design and installation costs;
- The residual balance of funds previously approved by the GC (Resolution [GC/54/R6](#) refers);
- Anticipated revenue from sales of old furniture and equipment.

31. Notwithstanding the above, the unfunded balance of approximately €5.96 million remains to be mobilized. The Secretariat has thus made the "Nouveau Centre" one of the priorities in its resource mobilization efforts during the next three years. One of the options being considered is to identify donors for equipping the IARC Biobank and the conference rooms, including the auditorium, with the possibility of naming those facilities after the donor concerned, where the contribution is considered substantial.

32. Several efforts were deployed since May 2018: firstly to identify potential donors by building an extensive database of donors and targeting specific institutes, foundations or individuals who may have been interested in investing in the new building; and secondly to communicate proactively about the building project. In December 2018, colourful palisades with public information about the history of IARC and its new building were erected around the future site, in collaboration with the Métropole de Lyon. Taking the opportunity of the World Cancer Day, the "Nouveau Centre" fundraising campaign was launched on 4 February 2019, inviting IARC's Lyon-based partners to a presentation about the "Nouveau Centre" building project. The event was an opportunity for IARC

scientists and researchers to meet, establish relationships, and exchange ideas with IARC's future neighbours, in addition to raising the need to fill the remaining funding gap by 2021.

33. At last, the Secretariat worked closely with the French authorities for an official statement from the French "Ministère de l'Action et des Comptes publics", confirming the following, which should help clarify the framework for IARC future fund raising activities:

- IARC is officially recognized as a public interest entity in France.
- IARC is officially entitled to receive donations which are tax-deductible from individuals as well as other legal entities, as per the conditions set forth in the relevant articles of the French "Code Général des Impôts".

REQUESTS TO THE GOVERNING COUNCIL

34. The Governing Council is requested to recognize with appreciation the strong support received from the Host Country institutions, both for the continued efforts to ensure adequate conditions of the current premises and for the progress made on the "Nouveau Centre" project.

35. The Governing Council is requested to recognize the remaining unfunded balance of €5.96 million to be mobilized prior to the planned move to the "Nouveau Centre" in 2021, and to encourage Participating States to contribute with voluntary contributions towards this target.

ANNEXES

Annex 1 – Different views of the selected project.

Annex 2 – Architectural note for the "Nouveau Centre".

Annex 1 – Different views of the selected project

View from Tony Garnier Avenue (South East corner)



South East aerial night view



Aerial view



View from the garden



View of the lobby



View of the auditorium



The laboratories



Cross-section of the building



METROPOLE DE LYON



ARCHITECTURAL PROJECT NOTE



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I. THE CHALLENGES OF THE PROJECT

The ideal project should:

- be **iconic** and symbolize the excellence of IARC's activities
- reflect the international aspirations of the Métropole de Lyon
- promote research, encourage intellectual synergy, and foster interdisciplinary interactions
- provide a pleasant working environment that promotes the health and well-being of the building's occupants
- set an example in terms of environmental sustainability through its design and energy-efficiency.

II. AN ICON FOR THE IMPACT OF RESEARCH

The new building is a **symbol** of IARC's activities, and is something that Lyonnais people can be **proud** of. It is simultaneously outstanding, remarkable, exemplary, and revealing. We wanted it to be an international standard for its promotion of health and well-being and for its embodiment of hope through research, without being arrogant or ostentatious.

The design is completely different from the architecture of the other buildings in the Biopôle area, such as those of pharmaceutical companies. Whereas those buildings value secrecy, the IARC project will be open and transparent to the world, and represents the capacity of IARC to serve humanity.

The design has the **stature of a United Nations institution**: the building is large, environmentally friendly, and innovative, and it represents optimism in a world that is in need of hope.

This project is like a nest for scientists, but it is also a medium of communication, which is essential for IARC's activities. The project has been designed as a communications tool, and the meaning of the building can be understood on several levels.

Each level of interpretation offers a different perspective, expressed either directly by the uniqueness of the volumes and spaces, or in a more metaphorical way by the innovative façades, which are inspired by nature (biomimicry).

At night, the building will communicate an unusual message, thanks to the design of lighting by Gilbert Coudène and his company, "Les Allumeurs de Rêves".

IARC is not subject to the whims of trends and fashions, and IARC and its building should remain solid in order to stand the test of time and to provide the time needed to understand the causes of cancer and how to prevent it. Time is an essential factor in research, and also in architecture.

The Gerland area has several buildings, without much coherence, with showy styles. In order to differentiate the IARC building, we have imagined a building reduced to its simplest expression:

- A monolithic structure, with rigorous and clear shapes, will appear to be suspended in the air. This monolith will be composed of research areas and administrative offices.
- The IARC Biobank and storage areas will be protected through their location on a semi-underground floor, which is not visible from the outside public area.
- The public areas (conference rooms, cafeteria, etc.) will be located between those two volumes, between earth and sky, and will be as open and transparent as possible.
- In the middle of the building, a circular atrium will enable good communication between research groups and a democratic organization of work spaces.
- At the centre of the atrium, an extraordinary garden will simultaneously provide a peaceful area, a space for meetings, and a place to just relax and enjoy the green outdoor space.
- Two enormous "tectonic faults" in the monolith will contain plants and will allow views into the heart of the building. These urban windows will show the informal meeting areas of the Agency, the spaces where research on cancer is discussed.
- Along the axis of the monolith, directly linked to the transparent base, there will be a forecourt of a size that represents the institutional aspect of the Agency.
- The green space of Parc de Gerland will be extended along a pedestrian path with a small garden on the western side of the building.

- The flags of the IARC Participating States will be aligned along the front of the monolithic building. The flag poles shouldn't hide the building but should support the institution.

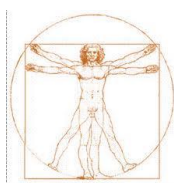
III. A LOGO, A SYMBOL, A METAPHOR

“An international cancer research institution under the auspices of the United Nations and engaged in a fight for life”

—Charles de Gaulle

IARC should represent:

- international collaboration
- the improvement of human welfare
- scientific progress and development.



This is represented through a balanced design which is subject to different interpretations.

At first sight, the square and the circle bring to mind **The Vitruvian Man**, Leonardo da Vinci's famous representation of the ideal and perfect proportions of the human body. In that sense, the shape of the building can be interpreted as an allegorical symbol of the Renaissance, of rationalism, and of Man at the centre of it all.



The design of the building can also be seen as referring to **the cell**. Indeed, the image of a single-celled organism with its central nucleus was a source of inspiration for our team.

Whatever the metaphorical interpretation of the design, the building is clearly identified and its organization easily understood. Its message is simple; **it is itself a logo**. The building is readable and understandable by everyone, whether seen from the ground or from the air.

The words of Charles de Gaulle will be silk-screen-printed onto the glass walls of the ground floor of the building.

IV. BIOMIMICRY – THE BUILDING AS A LIVING ORGANISM

Through their professional activities, IARC researchers might analyse how the human body works, and assess all the environmental factors that might have a negative effect on the body. They study a microscopic world in which living organisms, cells, and their proteins are organized in astonishingly complex systems.

Cells might be independent organisms, but they also interact with other cells in a social way. Organized groups of cells form living organisms that are much more complex, like human beings, who interact with their environment in a rich social way. Our architecture and design have been inspired by these aspects of the living world.

We have been **inspired by the magic of the cell** to consider the best way of organizing all the elements of the “programme” (technical and functional specifications) of the building, so that the whole is more than the sum of its parts, and the elements are not just juxtaposed, but really work together well.

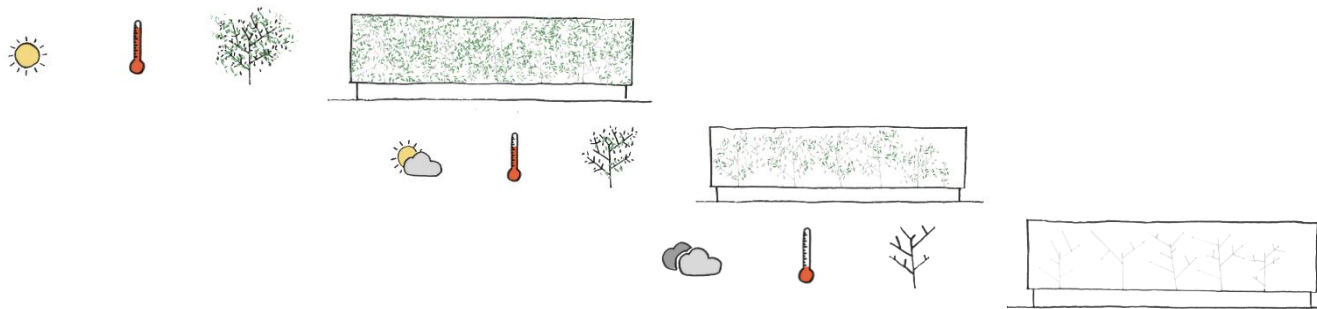
One of the challenges of this building is to make several different functions work together within the same envelope in an efficient way, to form a coherent “body”. By referring to the human body, we would like to show that the building has its own structural skeleton, with its muscles, its fluids, and its outer envelope or skin that protects the internal organs and enables interactions with the external environment.

This interpretation **inspired by biomimicry** has also been applied to the envelope or skin, and thus to the façades of the building.

Our aim was to develop a skin that manages the interactions with the exterior, that filters, protects, and responds depending on exterior conditions.

The façade will adjust to exterior temperatures by varying its degree of opaqueness to provide the need for natural light while protecting the interior. Thus, the transparent glass of the double-skin façade will become more opaque when the exterior temperatures are too high. The building will also protect itself when the light is too intense, and this will be done in an automatic way, without requiring any human manipulation and without using any electricity.

In this way, the double-skin façade, which will also reduce noise, will be alive. Graphics of plants will appear on the façade when the sun is bright, and disappear when it is cloudy. The external perception of the building will change constantly, depending on the time of day, the weather, and the seasons, and will reinforce the fact that IARC is a living Agency.



V. A CIRCULAR FUNCTIONAL APPROACH

The functional approach is based on the circle at the heart of the building, to be consistent with IARC's research principles and values.

The circle can be interpreted as:

- the nucleus of the cell, both independent within the organism and constantly connected to its environment
- a shape conducive to interactions, communication, and quick connections between different parts of the building
- an esprit de corps, with the values of harmony, sharing, respect, and equality.

Beyond its humanist translation, this particular shape and this organization will establish equality and reinforce the collaborative nature of the Agency.

VI. THE CENTRAL ATRIUM, A GREEN HEART



The centre of the building is a symbol in itself. The green circular garden, which is open to the sky and has the same area as the courtyard of the Hôtel de Ville de Lyon, invokes a concentrated reflection of nature.

The design of this centrepiece of the project has two aims:

- to improve the comfort of the personnel working in the building, who will be able to enjoy the fresh air and relax in a peaceful garden without needing to leave and go outside the secured area
- to provide a unique experience to all personnel and visitors, through a garden with many surprises, which illustrates the link between research and the richness of nature, including plants that are beneficial to humans. The suggested plants for the planned layout of the garden all have therapeutic properties.

The garden will be inside a perfect circle and will be an idealized image of nature, like a micro-geography that one can pass through but can't really go into. Thanks to the natural shapes of its

landscape, the garden will have a free and random style symbolic of nature, and will already be visible from the reception area.

This approach will be used everywhere in the project. IARC personnel will be consulted for their expertise and ideas.

VII. ILLUMINATION OF THE BUILDING

Lyon is the “Ville Lumière”. The lighting of the building at night offers an additional level of communication. When it is dark, the material appearance of the building will be completely transformed by the play of lights and colours on the building.

The central atrium will be illuminated with a light that fluctuates in intensity, like the beating of a heart.

Light will shine from this heart and through the “tectonic faults” in the building and through the transparent ground floor, in the colours of IARC.

More discreet lighting will be set up at some points inside the double-skin façade in order to make the monolith look ethereal.

Gilbert Coudène and his company, “Les Allumeurs de Rêves”, will work on a project to differentiate, in terms of intensity, vertical areas inside and outside the building. This project will consist of:

- lighting inserted with the double-skin façade, between the interior façade and the exterior glass with silk-screen printing
- lighting of the central atrium, which will be visible from the outside of the building through the “tectonic faults” in the building and through the transparent ground floor
- lighting of the biggest trees outside the building and in the central atrium.

This project will benefit from the innovative solutions of “SWING le Lab”, Gilbert Coudène's innovation platform, supported by the Métropole de Lyon. These innovative integrated solutions will emphasize the global lighting of the building and its surroundings.

VIII. HEALTH IN THE BUILDING – THE WELL LABEL

The building in which IARC personnel will carry out research on cancer should be consistent with the aim of IARC's activities.

It was important to us to provide a building that would be seen as a global standard for its promotion of health and well-being in the building:

- by not using any materials that are carcinogens or potential carcinogens
- by designing a building that promotes the health and well-being of its occupants and its visitors.

The quality of the ambience of the interior spaces, the choice of natural materials, the design inspired by biomimicry – all of these elements have been carefully considered in order to create a unique and optimal working environment.

For instance, water quality, air quality, choice of materials, quality of natural lighting, physical activity at work, comfort, and well-being will meet the criteria of the WELL building standard.

IX. AN INTEGRATED AND SUSTAINABLE BUILDING

Environmental sustainability has been taken into account in the design and future maintenance of the building. The future occupants of the building should be completely satisfied with the design choices that we have made.

- The building is compact.

- The thermal envelope is energy-efficient and airtight, to reduce the need for air conditioning and heating.
- The protective skin is flexible, adjusting its opaqueness according to the amount of sunlight, allowing light into the building in winter and protecting the building in summer.
- The technical equipment is energy-efficient, with low energy consumption, and is designed for easy maintenance.

X. A BUILDING IN LINE WITH THE STATURE OF INTERNATIONAL RESEARCH

This building will signify hope and optimism in preventing cancer.

- This iconic building is in line with the international stature of the Agency and its global standing.
- The building and the Agency share a common goal, and coexist in harmony.
- The working conditions are in line with United Nations standards.
- The building will be energy-efficient and have low energy consumption, and will thus be economical to maintain.