

**communiqué / press release****For immediate distribution****THE CCA PRESENTS *ARCHITECTURE IN UNIFORM: DESIGNING AND BUILDING FOR THE SECOND WORLD WAR*****Opening on 13 April 2011, this internationally traveling exhibition organised by the CCA investigates the development and impact of architecture during World War II.**

Chrysler Tank Arsenal, Warren Township, Michigan, by Albert Kahn Associates, 1941. Photograph by Hedrich-Blessing. © Chicago History Museum, HB-06539



Ford Motor bomber factory, Willow Run, Michigan, by Albert Kahn Associates, view of the drafting room, 1942. Photograph by Hedrich-Blessing. CCA Collection PH2000:0393. Gift of Federico Bucci. © Chicago History Museum, HB-07074-G

*Montreal, 28 March 2011*—The Canadian Centre for Architecture (CCA) presents the major exhibition ***Architecture in Uniform: Designing and Building for the Second World War***. On view from 13 April until 18 September 2011, the exhibition investigates the consequences of the Second World War on the built environment and reveals the immense development undertaken and responsibility carried by architecture during these years. Until now, few studies have analyzed the breadth of research, innovation, and building conducted by architects during the war years. Curator Jean-Louis Cohen fills an important historical gap by investigating the work and achievements of the architects and designers active during World War II across the political battle lines and demonstrates that the war served as an accelerator of technological innovation and production that would lead to the supremacy of modernism in architecture.

*Architecture in Uniform* is the first in-depth study to analyze the modernization of architectural theory and practice during the period spanned by the German bombing of Guernica in 1937 and the Japanese surrender following the American

bombing of Hiroshima and Nagasaki in 1945. While many architects were called to serve as active combatants, others were able to pursue their professional work in the service of an intensified industrial production. The war drew upon every aspect of architectural expertise and led to significant design innovations and advances in technology and production. As a result, architects were almost as strategically indispensable as engineers and scientists in contributing to their respective countries' war efforts.

"The war was a process of transformation involving all components of architecture in its mobilization. This militarization of the field forced the pursuit of *the new* in order to meet the demands of war production: new materials needed to be implemented in new ways, and new technologies needed to be put to new uses," states exhibition curator Jean-Louis Cohen, Sheldon H. Solow Professor of History of Architecture at New York University.

Among the defining characteristics of World War II were its total industrialization and the elimination of the traditional combat front as aerial attacks brought the war to cities far removed from the front lines. Architects were involved in defining new offensive and defensive tactics, planned and built factories to realize unprecedented production pressures, devised urban schemes for civilian housing, as well as concentration camps, and influenced the occupation, destruction and reconstruction of cities. Based on a comparative principle, the exhibition is organised thematically and constructs parallels of wartime activity between the main fronts of war, dealing with architects and projects in Canada, France, Germany, Italy, Japan, the Netherlands, Spain, the United States, and the USSR.

The exhibition is part of a broader project by the Canadian Centre for Architecture. Its title, inspired by the work of W.G. Sebald "On the Natural History of Destruction," describes its objective to investigate the different roles of architecture from the Second World War to the present. The project includes the exhibition ***A paper war: pictures and words, 1939-1945***, which displays publications and catalogues of exhibitions, produced during the war period as means of propaganda and reflection on the war and its consequences. This wider initiative also comprises the exhibition "***The Good Cause: Architecture of Peace***" that analyzes the spatial and social implications of the peace missions in contemporary conflicts. This show is produced by the Netherlands Architecture Institute (NAI) and will be on view at the CCA in summer 2011.

CCA Executive Director and Chief Curator Mirko Zardini adds: "The CCA's exhibitions and programs investigate often overlooked ideas that can inform and advance the contemporary architectural debate and practice. *Architecture in*

*Uniform* tackles a large gray zone of our discipline and offers new perspectives; the war served not only as an accelerator of technical innovation, but also implicated architects in a military structure with precise social, political and moral responsibilities the effects of which are still felt today.” Earlier CCA exhibitions such as *1973, Sorry Out of Gas* (2007) or *Actions: What You Can Do With the City* (2008), examined the role of architecture in transforming contemporary society at large. Similarly, the aesthetic and technical innovations of the war years presented in *Architecture in Uniform* were not only critical in serving the war efforts of the moment; notions such as creating prefabricated or mobile structures, developing new applications for recycled materials or implementing standardized production on an architectural scale created a deep shift in the general understanding of how cities and homes could be conceived, constructed and used.

## ABOUT THE EXHIBITION

*Architecture in Uniform: Designing and Building for the Second World War* is the result of extensive research by curator Jean-Louis Cohen and features drawings, photographs, posters, books, publications, models, historical documents and films from all sides of the conflict. The global dimension of the war is reflected in the materials, with items from the CCA Collection shown alongside loans from important international institutions including the Akademie der Künste, Berlin; the Art Institute of Chicago; the Deutsches Architektur Museum Frankfurt; Fondation Le Corbusier, Paris; Museum of Modern Art, New York; the Nederlands Architectuurinstituut, Rotterdam; the Royal Institute of British Architects and the Victoria & Albert Museum, London; the Shchusev Architecture Museum, Moscow; the Wolfsonian - FIU, Miami Beach; and others.

The exhibition content is structured along specific themes including *Home Front, War to Cities, Producing War Production, Mobile Architectures, Fortress Europe, Camouflage, Macro-Projects* and *From War to Peace*, among others. They guide visitors through key aspects of wartime activity and innovation such as the extensive territorial systems conceived for defense and production, but also, on the Nazi side, for mass murder and extermination; the pursuit and application of new materials and fabrication processes; and visionary aesthetic thinking applied to projects such as architectural camouflage, the dramatic recreation of Pacific theatre battle scenes using scale models by Norman Bel Geddes, or the staging of the Nuremberg trials in a courtroom designed by landscape architect Dan Kiley.

Gallery 1 evokes the era with images of cities at war including a series of photographs by **August Sander** showing the ruins of Cologne following allied air

raids. The images speak of the scale of architectural devastation and the implication of architects both in the destruction of cities and their subsequent reconstruction.

Gallery 2 features the themes *Architects in Uniform*, *Home Front* and *War to Cities*: Portraits of architects accompanied by short descriptions of their respective activities reflect the variety and intensity of the wartime experience. Included are **Alvar Aalto**, **Norman Bel Geddes**, **Henry Dreyfuss**, **Charles and Ray Eames**, **R. Buckminster Fuller**, **Ernö Goldfinger**, **Myron Goldsmith**, **Walter Gropius**, **Albert Kahn**, **Le Corbusier**, **Erich Mendelsohn**, **Ernst Neufert**, **Richard Neutra**, **Albert Speer** and **Bruno Zevi**, among many others.

The Second World War extended its realm far beyond the combat zones, and each fighting nation mobilized a civilian workforce of unprecedented proportions to support its total industrialization. Wartime rationing included finding alternative or recycled materials to be used in place of strategic materials reserved for the war efforts, home energy consumption was reduced with the introduction of new insulating materials, and home-grown food was encouraged to offset shortages. In addition to propaganda campaigns designed to boost morale, the idea of winning the war on the “home front” was echoed in cultural institutions that tried to educate and guide citizens. In 1942, the Museum of Modern Art in New York presented *Useful Objects in Wartime*, an exhibition of simple domestic objects produced with non-strategic materials. A selection of the same items is shown at the CCA, as are posters and propaganda tools from all sides of the conflict.

Gallery 3 features the themes *Producing War Production* and *Housing the Workers*: Civil engineers and architects played a leading role in the construction of the thousands of factories and accompanying worker housing required to produce aircraft, vehicles or munitions. To reduce risk of aerial attacks, almost all countries created new industrial landscapes by removing these production sites from the proximity of national borders and large cities. Many of these complexes took on the scale of real cities, often employing tens of thousands of workers. Among the highlights are **Albert Kahn Associates’** Chrysler Tank Arsenal and Ford Motor Bomber Plant in Michigan, both steel-frame structures with glazing on all sides; **Ludwig Mies van der Rohe’s** first American building, the Minerals and Metals Research Center, which was erected in 1943 as part of his master plan for the Illinois Institute of Technology; recognized as one of the most successful of all wartime projects is **Richard Neutra’s** Channel Heights complex for workers at the US Navy shipyards in San Pedro, California. It is articulated in a modern architectural language, comprising 600 units with custom designed wood furniture and accompanied by public facilities ranging from daycare centre to supermarket.

Gallery 4 features the themes *Mobile Architectures* and *Fortress Europe*: With armies operating thousands of miles from their home bases on four continents, the Second World War required intensive movement of equipment and manpower. Architects were concerned with developing lightweight, modular structures that could be easily transported, assembled and disassembled. In collaboration with designer and builder **Jean Prouvé**, **Le Corbusier** imagined metal-framed “flying schools” that could follow fleeing populations and be reused during peacetime; **R. Buckminster Fuller** designed the Dymaxion Deployment Unit using steel elements of grain silos to house American troops in the Persian Gulf in 1942-43; the simplest and easiest structure to produce, however, was the Quonset hut. Some 170,000 examples of the lightweight, barrel-shaped shelter were produced to house soldiers and refugees, and their everyday use was captured in moving sketches by the young architect **Myron Goldsmith**.

In contrast, the war also required gigantic systems of fortifications some of which still stand today. Built following Hitler’s orders, the Atlantic Wall consisted of 15,000 concrete fortifications extending over 2,658 kilometers from northern Norway to the Basque country. In the United States, architects **Erich Mendelsohn** and **Konrad Wachsmann** worked with designer **Hans Knoll** on creating a false “German” village in Utah, with the sole purpose of studying the effectiveness of napalm bombing. The prefabricated wood structure of the accompanying “Japanese” village was designed by **Antonin Raymond**, who authentically decorated the houses with relevant domestic equipment and bedding.

Gallery 5 features the themes *Camouflage, or the Design of Invisibility* and *Air Raid Protection*: Each warring nation set up highly sophisticated camouflage teams that called on the visual and inventive skills of architects and landscape designers. Their purpose was to conceal sites of all scales, from an individual gun battery or bunker to large-scale factory hangars and even parts of cities. The domain was of such importance that it was among the few remaining subjects taught in architectural education, as did **László Moholy-Nagy** with **György Kepes in Chicago**. In England, **Hugh Casson** developed schemes to obscure hangars with real vegetation, while Hollywood set designers were hired in California to cover military bases and factories with false landscapes, including mock suburban housing.

**Le Corbusier** had foreseen the threat of air strikes as early as 1930 and used it as a justification for the urban scheme of his “Radiant City”, which broke with the dense concentration of existing cities. In the early years of the war, other architects were similarly engaged in prospective thinking and **Ernö Goldfinger** made studies of camps for the evacuation of civilian populations, evaluating the strength of existing buildings and their below-ground areas.

Gallery 6 features *Four Macro-Projects*: The trend toward bigness was evident in the industrial production, logistics, and the conduct of the Second World War itself. Architectural projects expanded to the territorial scale, relating buildings to strategic networks of highways, railroads, hydroelectric facilities or other tactical locations. The exhibition examines four of these mega-projects, each conceived by expanded teams of architects assembled to develop their complex schemes: the Pentagon, with its offices for 32,000 employees is the largest building constructed during the war by a team of a hundred architects lead by **George Bergstrom** and **David Witmer**; Oak Ridge, a secret city in Tennessee was planned by **Skidmore, Owings & Merrill** to house 75,000 employees working on nuclear facilities for the creation of the atomic bomb; at the Auschwitz concentration camp, genocide was industrialized and integrated in an urban plan by complicit architects including **Hans Stosberg** and former Bauhaus student **Fritz Ertl**; and the modern factory of Peenemünde was a Nazi rocket production and launching facility extending for a dozen kilometers on an island on the Baltic coast.

Gallery 7 features the themes *From War to Peace* and *Imagining the Postwar World*: The exhibition's final gallery presents a range of projects that foreshadowed the issues of reconstruction, memorializing and recycling war technology in the different countries of the conflict. As the end of the war was an eagerly anticipated event, many of these projects were already underway during wartime. In the United States, industries made an effort to open up markets of mass consumption to the materials and products developed during the war – notably the emergence of plastics for everyday use, and new types of furniture based on the moulded and laminated plywood techniques developed by **Charles and Ray Eames**. In its 1946 exhibition *Britain Can Make It*, the Victoria & Albert Museum in London similarly presented modern items for everyday use developed from military technologies or materials – what Richard Neutra would call “the best residuum of wars.”

#### ABOUT THE CURATOR

Jean-Louis Cohen is Sheldon H. Solow Chair for the History of Architecture at the Institute of Fine Arts, New York University. Mr. Cohen's research and publication activity has focused on twentieth-century architecture and urban design, with studies of German and Soviet architectural cultures, colonial planning in North Africa, Le Corbusier's work and Paris planning history. He has curated numerous exhibitions, including, most recently, *Alger, paysage urbain et architecture*, at the Institut français d'architecture in Paris (2003) and *The Lost Vanguard*, at the Museum of

Modern Art in New York (2007). In 1997, Mr. Cohen was appointed by the French Minister of Culture to create the Cité de l'architecture, a museum, research and exhibition center opened in 2007 in the Paris Palais de Chaillot. During this period, he directed the Institut français d'architecture and the Musée des Monuments Français, the two main components of the Cité.

## EXHIBITION DESIGN

The New York based firms WORKac and Project Projects developed with the CCA curatorial team a conceptual approach to the design of the exhibition.

In 2010, WORKac was the recipient of a New York Design Commission award and nominated for the Chernikhov Prize. In 2009, WORKac was honored at the White House as Finalist for a National Design Award and in 2008, the firm was selected for the Architectural League's Emerging Voices series and identified by Icon Magazine as one of the 25 most-influential new architecture firms in the world.

Project Projects was founded in 2004 by Prem Krishnamurthy and Adam Michaels, Project Projects is a design studio focusing on print, exhibition, and interactive work with clients in art and architecture. The firm was a finalist for the prestigious Cooper-Hewitt National Design Award in 2009, in recognition of the excellence, innovation, and public impact of their work.

## THE CATALOGUE

*Architecture in Uniform: Designing and Building for the Second World War* is accompanied by a publication of the same title, available in English and French editions in April 2011. Co-published by Hazan and the CCA, the book follows the themes of the exhibition within a broader interpretive narrative, and is illustrated by over 350 color and black and white images of drawings, photographs, maps, charts, and posters. ISBN reference numbers: 978-0-920785-92-8 (CCA) and 9782754105309 (Hazan).

## RELATED PROGRAMS - *Wartime Cinema* in collaboration with the NFB

*Architecture in Uniform's* related programs include talks with NFB curators Marc St-Pierre and Albert Ohayon and special screenings of propaganda films. The series, entitled **Wartime Cinema**, explores the archives and rare footage from the **National Film Board of Canada**. It is produced and distributed in cooperation with the Canadian Wartime Information Board. With the presentation of these films and through the talks, the NFB is the main Canadian component of this international exhibition.

Thursday night talks and screenings will take place on 28 April, 5 May, 12 May, and 19 May 2011 at 7 p.m. in the Paul-Desmarais Theatre. The screenings will be repeated on following Saturdays at 2:30 pm, on 30 April, 7, 14 and 21 May. Further information available on: [www.cca.qc.ca/uniform](http://www.cca.qc.ca/uniform)

Marc St-Pierre has a background in cinema, theatre, and philosophy and has been the French film collection analyst at the NFB since 2004. Albert Ohayon studied film production and journalism at Concordia University in Montréal and has worked at the NFB since 1984. As the French and English film collection analysts, St-Pierre and Ohayon program titles for the NFB's online screening room and write articles for the site on the history of the NFB, its filmmakers, and its films.

## THE CCA

The CCA is an international research centre and museum founded in 1979 on the conviction that architecture is a public concern. Based on its extensive Collection, the CCA is a leading voice in advancing knowledge, promoting public understanding, and widening thought and debate on architecture, its history, theory, practice, and role in society.

## FUNDING

The CCA thanks sponsor Hydro-Québec for its support of the exhibition.

The CCA gratefully acknowledges the Ministère de la Culture, des Communications et de la Condition féminine, the Canada Council for the Arts, and the Conseil des arts de Montréal for their continuous support.

# # #





MEDIA CONTACTS:

Isabelle Huiban  
Head of Press Relations  
Canadian Centre for Architecture  
Montréal, Canada  
[ihuiban@cca.qc.ca](mailto:ihuiban@cca.qc.ca) / [media@cca.qc.ca](mailto:media@cca.qc.ca)  
(514) 939-7001 ext. 2607

Theresa Simon  
Theresa Simon & Partners  
London, United Kingdom  
+44 (0)207 734 4800  
[theresa@theresasimon.com](mailto:theresa@theresasimon.com)

**High-resolution digital photographs** are available online at [www.cca.qc.ca/press](http://www.cca.qc.ca/press) under the heading "Exhibitions." The login is **general** and the password is **journal**.