

*Community Planning for  
Technological Development*  
A New Bargaining Process

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This article outlines a process of "community collective bargaining" where community representatives join workers, corporate managers, and investors in negotiating trade-offs to achieve conflicting goals for technological development. The bargaining model is constructed from experiences in Chicago and Pittsburgh. The Chicago case, in which neighborhood organizations bargained with the city's large banks to increase inner-city lending, provides a general framework for understanding broadly based negotiations over structural economic issues. The Pittsburgh case offers an example of this negotiating framework applied to high-technology development.

High-technology industries are increasingly becoming the focus of attention for economic planners around the country. State and local governments are designing programs to stimulate technological innovation and the growth of high-technology industries. These economic development programs, geared to attracting and supporting new and expanding high-technology firms, range from policy development, education and training to support for research, technical and management assistance, and financial assistance (Peltz and Weiss). While many of these initiatives are new and difficult to evaluate, their design and implementation often suffer from a lack of balanced representation among the various constituencies with a stake in community planning for high-technology industries. Public sector policymakers who seek to create a consensus over goals for high technology devel-

opment are often constrained by the imbalance of power among businesses, workers, citizens, and other political and economic interests.

States and cities that have tried to avoid the traditional approach to economic development have been stymied. In California, the administration of Governor Edmund G. Brown, Jr., attempted to do this by bringing together corporations, entrepreneurs, labor unions, and citizen groups through the California Commission on Industrial Innovation (CCII). The existence of CCII created an arena for public-private bargaining or "quid pro quos" within the high-technology sector (CCII; Weiss 1984).

The Brown administration was unable to achieve the desired outcomes of balanced representation and political consensus. The possibility of consensus was hampered by the state's inability either to control the necessary resources or to mobilize a broad-based coalition of support enough to influence the development of high-technology industries. As a result, the state's high-technology development efforts became fragmented, consisting of a "string" of initiatives linked more by immediate concerns than by effective long-term strategies (Weiss 1984).

The California experience indicates the limits faced by government in addressing the impact of high technology development. In the absence of an informed and mobilized political constituency of citizen and community interests, policymakers lack the power and resources to broker effectively with business interests over the direction and outcomes of economic growth. This conclusion points to another possible policy approach, one in which government uses its regulatory and spending powers to convene a direct, collective bargaining process between community coalitions and private corporations over economic development policy.

This strategy has been outlined in the direct negotiations between a coalition of neighborhood organizations in Chicago and the city's largest financial institutions over inner-city real estate lending practices. The community groups have acted as spokesmen for real estate developers, sitting at the bargaining table with real estate lenders to negotiate a plan for privately financing community redevelopment of inner-city neighborhoods.

The strategy of negotiated financing for neighborhood revitalization is made possible by a federal law called the Community Reinvestment Act (CRA). The CRA essentially requires legally chartered financial depository institutions to loan money in the geographic areas from which they draw their deposits. The CRA and its companion legislation, the Home Mortgage Disclosure Act (HMDA), were passed by Congress in the mid-1970s as a response to the "redlining" issue, in

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which various community groups documented patterns of disinvestment by lending institutions in certain central-city neighborhoods. The HMDA required public disclosure of lending patterns so that the performance of banks and savings institutions can be evaluated by community groups and public officials. Citizens can obtain access to HMDA data and utilize it to challenge an institutional lender's CRA record. A CRA challenge can cause federal regulators to deny permission for lenders to add new branches or to merge with or acquire other institutions.

These two tools have been used by the Chicago Reinvestment Alliance, a broad coalition of community organizations, neighborhood development groups, and city-wide development networks from across Chicago who share common experiences in both facilitating neighborhood reinvestment and developing employment and housing opportunities. In the spring of 1984 the Alliance successfully negotiated neighborhood lending agreements with three of Chicago's four largest banks which were seeking approval from federal regulators for their expansion plans. First National, Harris, and the Northern Trust Banks agreed to create an aggregate, five-year lending pool of \$173 million for housing, commercial and industrial development in inner-city Chicago neighborhoods. The Alliance has also negotiated a \$20 million agreement for home improvement loans with Continental Illinois Bank, another large Chicago institution that was seeking to expand its operations. The Chicago case is perhaps the most significant community-bank partnership of its kind in the country, due to the size and scope of the agreements, as well as the role played by community-based organizations in loan packaging and program review.

The most distinctive feature of this model of negotiated development is that it is based primarily on private initiative—no government agency formulates or implements a program for neighborhood reinvestment. Instead, strategies are both created and managed by community organizations in tandem with financial institutions. The government acts (a) as a formal rule maker, setting the context for negotiations through enforcement of the Community Reinvestment Act; (b) as a contributor to fact finding, through enforcement of the Home Mortgage Disclosure Act and in the case of the City of Chicago through the enforcement of the city's own more extensive ordinance which also requires disclosure of savings deposits and commercial lending patterns; (c) as an informal broker in negotiations, as was the case with the mayor of Chicago; and (d) as a facilitator of the development process, through grant and loan programs, planning assistance, infrastructure improvement, and other forms of subsidy. The interac-

tion of the three sectors—citizen groups, government, and lenders—creates a “private-public-private” decision-making process (Weiss and Metzger 1986b).

The presence of federal regulatory leverage and the existence of a mobilized political constituency in the form of a coalition of neighborhood organizations were vital to the outcome of the Chicago case. The application of this model of negotiated development to the realm of technological innovation brings with it different actors, goals, strategies, tools, and resources. In Pittsburgh, recent community planning efforts for technological development illustrate the dynamics and possibilities of community collective bargaining as applied to high tech.

High-technology planning in Pittsburgh has centered on the Oakland neighborhood, a racially and ethnically diverse working-class community that is located four miles east of Pittsburgh’s “Golden Triangle” of downtown corporate headquarters. The geographic concentration of educational institutions within Oakland, in particular the University of Pittsburgh (Pitt) and Carnegie-Mellon University (CMU), has made the neighborhood a focal point for advanced technology development. Plans and proposals for regional economic revitalization have cited the region’s universities as crucial actors in the development process, working in tandem with business and government to develop and transfer technologies to industries and to foster the creation of new technology-based firms (ACCD; Caliguiri et al.). In Oakland, the “critical mass” of CMU’s robotics and computer-science expertise prompted the U.S. Department of Defense to locate the Software Engineering Institute (SEI) near the CMU campus. In addition, CMU, Pitt, and other actors have converged around the planned redevelopment of an abandoned Jones and Laughlin steel mill, located within Oakland on the banks of the Monongahela River, into a technological and industrial park (Urban Land Institute).

The political and economic history of Oakland has been characterized by tension arising from the uneasy relationship between the area’s institutions and its residential neighborhoods. Oakland’s institutions include CMU, Pitt, the six affiliate hospitals of the University Health Center of Pittsburgh (UHCP), and the Carnegie Institute. CMU and Pitt are the two largest universities in the region, while UHCP is a regional health care center and the Carnegie Institute operates major art and natural history museums and related cultural activities.

Situated on a plateau north and east of the Monongahela River, Oakland initially developed as a nineteenth-century suburb. Institutional and residential development in the community proceeded relatively free of conflict in the first half of the twentieth century, and

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Oakland enjoyed some of the finest architecture and landscaped urban parks in Pittsburgh. Land-use conflict emerged after World War II, with the proliferation of institutional expansion plans which threatened to alter the shape and dynamic of the community. The conflict initially revolved around Pitt, which initiated a building boom during the 1960s when it changed from a private to a state institution. The number of buildings on campus rose from 23 to 40 after 1964. Pitt also cleared away land in Oakland, as the campus grew from 64 to 110 acres, through the relocation of the Pittsburgh Pirates from Forbes Field and the acquisition of old residential and commercial blocks. By the end of the decade, Pitt embarked on a master plan to construct several large new facilities, involving the purchase of real estate throughout Oakland, often at exorbitant prices.

The population of Oakland began to slip in the 1970s due both to the displacement of residents and small businesses with institutional expansion and to the overall loss of manufacturing jobs in the city. The additional employment generated by the universities and the hospitals has attracted newer, middle-income residents, but only in North Oakland. With some subdivision of low-income units in West Oakland, the community's total population has reached nearly 25,000. The institutions and businesses in Oakland now employ over 20,000 persons, composing nearly 15 percent of Pittsburgh's total employment base.

Many of the community-based organizations within Oakland were formed during the late 1960s and early 1970s in response to the institutional expansion plans of Pitt. The fear of displacement prompted the creation of People's Oakland in 1970. The efforts of this group and other community organizations in Oakland halted the full implementation of Pitt's master plan, and by 1972 a broad public-private vehicle for community planning, called Oakland Directions, Inc., had been established. A comprehensive community planning process from 1976 to 1980 produced the Oakland Plan, which laid out an ambitious agenda for housing rehabilitation, neighborhood improvements and better transportation in Oakland (Oakland Directions, Inc.).

One of the direct spin-offs of the Oakland Plan was the creation in 1980 of the Oakland Planning and Development Corporation (OPDC). OPDC has emerged as one of the most sophisticated community development corporations in Pittsburgh by developing over 120 units of low- and moderate-income and elderly housing, improving the traffic flows and relieving density in Oakland. Governed by a community-based board and funded by the city and private foundations, OPDC has sought to preserve neighborhood stability through community planning, housing and, now, mixed-use development.

The Oakland Plan of the late 1970s did not anticipate the emergence of the Oakland neighborhood as a key growth node in regional economic development. The economic upheaval experienced in the Pittsburgh metropolitan area from 1979 to 1983, when 120,000 jobs were lost—many in heavy manufacturing industries such as steel—prompted the region's business, political, and institutional leadership to stress the role of high technology industries and local universities in Pittsburgh's economic transition and recovery. The geographical concentration of educational institutions within Oakland has made the community a logical target area for technology development activity.

CMU has a strong national reputation in computer science, robotics, magnetics, and special materials. Its research volume has been growing rapidly, rising by 50 percent over the last two years, with the Department of Defense as the largest research sponsor. Forty percent of CMU's research is related to industry, undertaken by either the Robotics Institute or the Mellon Institute. The Robotics Institute, which handles contract research, is growing and has a current budget of \$10 million. One-third of its work is for DOD, and it has twenty-five industrial sponsors, including Westinghouse and Digital Equipment. About half of the Institute's work has a clear, mid-range, applied industrial focus, while the other half is general robotics research.

The Department of Defense's Software Engineering Institute (SEI), located in Oakland near the CMU campus, is the first federally funded research and development center to be established in over twenty years. It is expected to create 250 jobs with an annual budget of more than \$30 million. The primary audience for SEI will be defense contractors. Sixty percent of its work will be technology transfer to contractors who are expected to open local offices to develop relationships with this research institute.

Pitt's research and development activity is focused on biomedical technology in association with UHCP. Most of this research and development is done on-campus, although UHCP has just developed a Nuclear Magnetic Resonance research institute off-campus in Oakland and is planning a major new Cancer Institute at an undetermined location.

This activity of CMU and Pitt has converged on the planned redevelopment of the abandoned Jones & Laughlin steel mill into an advanced-technology industrial park. The Urban Redevelopment Authority (URA) is the owner of the Oakland site, while the Regional Industrial Development Corporation (RIDC) is the quasi-public developer for the site. CMU hopes to develop a National Center for

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Robotics in Manufacturing in the new industrial park. The center would be linked to the work of the Robotics Institute, but would focus more on product development and the production process and would attract spin-off software development firms to the park. Pitt's interest in the park revolves around a biotechnology manufacturing center which would foster the growth of medical research and development activity on the site.

The high technology "boomlet" in Oakland and the redevelopment plans for the J & L site prompted OPDC to assess and define its role in local economic development. Without any role in the decision-making process, OPDC would be able to make no contribution to the high technology agenda created by entrepreneurs and university and government officials for Oakland. Several points of political leverage existed for OPDC that could facilitate access to power and lead to a brokering role for OPDC in the planning and development process.

First, OPDC had an established, working relationship with the administration of Mayor Richard Caligiuri because of its track record as one of Pittsburgh's strongest and most capable community development corporations. In particular, OPDC was an important member of the Mayor's Oakland Task Force. Second, OPDC had developed a working relationship with Pitt as a result of Pitt's support of and involvement in Oakland Directions, Inc., and the implementation of the Oakland Plan. These points of leverage enhanced OPDC's power in two areas—local government funding and regulatory support for high technology development projects in Oakland and the negotiation of a development agreement between Pitt, CMU, URA, and RIDC for the J & L site.

To enhance their bargaining power, OPDC sought to become recognized as an informed actor in high technology development. The absence of a rigorous analysis and projection of the effects and outcomes of technological innovation in Pittsburgh and Oakland provided OPDC with the opportunity to establish its credentials. OPDC obtained a planning grant from the Economic Development Administration of the U.S. Department of Commerce and hired economic development consultants from the University of Illinois at Chicago to prepare an impact assessment of advanced technology development in Oakland (Weiss and Metzger 1986a).

The forty-page impact assessment, completed in early 1986, identifies four key sectors of advanced technology development in Oakland—computer software, robotics, medical research and development, and business support services. Using local and national economic data to analyze trends, the report cites computer software

as experiencing fast growth rates in Oakland and Pittsburgh, although the actual number of software jobs as a proportion of the area's total employment base will likely remain small. Software development has mostly produced jobs for keypunchers and computer operators. Oakland's location should continue to make it an attractive site for software firms.

According to the report, the emergence of the robotics industry in Oakland is strongly tied to the continued growth of Pittsburgh's computer software industry. The local market for the application of robotics and software technology will receive a boost from rising Department of Defense expenditures as well as from Pittsburgh manufacturers seeking to modernize aging capital equipment. Industrial retention through robotics development, however, will likely produce job displacement through factory automation that will not be offset by new software jobs.

The report states that medical research and development will continue to exhibit potential for strong growth in Oakland because of local university resources in biotechnology and software. Again, the number of jobs directly generated by medical technology will likely not be large, and the importance of the sector will be more in the commercialization and application process. The indirect effects on employment of advances in research and development are not clear, although the demand for health technicians and software professionals in Oakland will probably grow.

The report projects that the expansion of advanced technology development in Pittsburgh will generate growth in related business support services. High-tech business services will most likely locate within and adjacent to the core of current development in Oakland, creating pressure for office space and increasing local, white-collar professional employment. The scope of technology development and the dynamics of the small office market will set the limits to the growth of business support services in Oakland.

The consulting report assesses the effects on the community of advanced technology development in Oakland in three areas—employment, housing, and office space. Employment will grow, particularly in software, which will be the key sector determining the prospects for technology development in Oakland. The distribution of advanced technology employment in Oakland will be two-tiered. Software professional jobs that are accessible only to those with advanced computer degrees will form the core of the upper tier which will also include a smaller number of highly paid professionals in medical research and development and related business support services. The



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lower tier will consist mostly of two groups—low-paying, clerical computer keypunching and operating jobs, and technical and medical laboratory support jobs.

According to the report, housing demand by high tech professionals will affect Oakland only if new or renovated housing is developed in sufficient scale to create a new, upscale housing environment. Without programs to ensure affordable new or rehabilitated housing, Oakland is likely to experience continued deterioration of commercial and industrial areas, hampering future institutional and advanced-technology growth. The report also projects that growth in business support services associated with advanced technology development will increase the demand for office space in Oakland. Office demand should be intense near the SEI site, but the limited amount of office development sites should constrain the growth of office space in Oakland's business districts.

The report also examines two crucial high technology development sites in Oakland—the Pittsburgh Technology and Industry Park, and the Software Engineering Institute. The industrial park, located on the old J & L steel mill site, may be delayed by initial development and funding problems. In addition, unless the site's unique urban advantages are accentuated, the widespread availability of good, suburban industrial real estate will hamper leasing efforts, even if the public sector absorbs high initial development costs. The report sees brighter prospects for the Software Engineering Institute. Employment spin-offs from SEI's defense-related research will result from software firms and business support services that locate near the facility. Steady growth in defense spending will help SEI overcome any early difficulties, and the Institute should make an impact in Oakland through job creation for software professionals and increased demand for local office space.

The impact assessment makes five recommendations. First, special services, on-site amenities, public access, and research links with the universities should be promoted on the J & L site through a cooperative process to distinguish it from the traditional model of privately developed, suburban industrial parks. Second, job linkages for Oakland residents should be established within the advanced-technology sector, and employment training provided to equip residents with skills for jobs in high tech. Entrepreneurs, public and private agencies, local institutions, and OPDC should work together to formalize these arrangements.

Third, local institutions and private developers should invest directly in OPDC's efforts to improve the community's housing stock. A

housing trust fund financed by institutional and private contributions should be created to support low and moderate income housing development in Oakland. Fourth, OPDC should engage in office development in Oakland so that it may broker for job commitments and generate an income stream to support its nonprofit activities. Finally, the report recommends that the role of Oakland Directions, Inc., and the Mayor's Oakland Task Force in mitigating the impact of development and monitoring growth should continue to be recognized and supported.

The impact assessment has provided OPDC with a tool to establish credibility with the public, private, and institutional actors involved in the high-technology planning process and to inform and organize its constituency of community-based interests around local economic development policy. In the latter arena, OPDC has worked with the North Side Civic Development Council, which also represents a neighborhood affected by advanced technology development, to convene a citywide coalition of community development organizations in Pittsburgh around developing an alternative strategy to the regional economic development plans created by corporate-dominated groups.

The Pittsburgh case outlines a bargaining process over high-technology policy initiated by a community-based group. OPDC has been able to draw upon its own political resources to create a framework for negotiations and to legitimize its role as an important actor in local economic development. Although this case continues to unfold and its final outcome is not yet clear, the information provided by the impact assessment has enhanced OPDC's power and its capacity to organize for broadly based representation in the planning process. This points to the value of institutionalizing a "technology impact statement" into community planning efforts for high-technology development. The impact statement could operate as government-enforced leverage, similar to the federal legislation in the Chicago case, that would contribute to fact-finding and stabilize the bases of power between community interests and private corporations in formulating high technology policy.

The Pittsburgh experience indicates the possibilities of using the model of community collective bargaining to shape high technology development. It also raises several issues that set limits to community planning for technological development. The first group of issues concerns the technological impact statement—it may be difficult to assess the real consequences of high-technology on communities. In particular, the complexity and dilemmas of the employment issue—what kind of jobs are created, who gets the jobs—may be difficult to predict and resolve (Weiss 1983).

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The second set of issues focuses upon representation in the community bargaining process. Defining a "community"—its size and its leaders—that is independent of government representation can be difficult amidst conflicting interests and groups. Community representation may lose its relevance and accountability once it is institutionalized into a decision-making structure. Despite its limits, the model of community collective bargaining can be useful to community groups, government officials, workers, and corporate leaders working to initiate a democratic planning process for the introduction of new technologies into their communities.

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TECHNOLOGICAL  
CHANGE AND

THE TRANSFORMATION  
OF AMERICA

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