

*Emerging
Trends,
Future
Directions:*

An East Valley Environmental Scan

Prepared for:

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ENVIRONM ENTAL SCAN

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Emerging Trends, Future Directions

INTRODUCTION

What are the forces that will shape the future of the community college? How can this future be anticipated so that planning targets the most critical trends, events, and developments? How can colleges develop the “strategic intelligence” needed to stay ahead of the curve in a fast-changing higher education environment?

Environmental scanning is a process by which the external environment of an organization is examined to identify new, or unexpected, trends or events that could have implications for the future of an organization. These trends and events could be social, economic, technological, or political in nature. An understanding of new developments in the external environment is critical to planning for the future; thus, environmental scanning is one of the necessary components of sound strategic planning.

This environmental scan is intended to provide a broad base of information about the context in which community colleges serving the east valley operate. Trend data provide information about what has occurred over time, and projections offer indications of what will likely happen in the future. Events are important “things that happen” in the community college environment that might result in a change for the future. It is up to community college leaders to use the information about trends and events provided in an environment scan. This information, combined with a comprehensive assessment of the organization’s internal conditions, is the foundation for planning.

Mesa Community College, Chandler-Gilbert Community College, and Rio Salado College funded this project cooperatively to learn more about some of the external factors that are affecting—or will affect—them as institutions. *Emerging Trends, Future Directions*’ focus is the “east valley” which is defined here as the cities of Mesa, Tempe, Chandler, Gilbert, and Queen Creek and the six-mile service areas for Mesa Community College at Southern and Dobson, Mesa Community College at Red Mountain, Chandler-Gilbert Community College, and Williams Center. Although Rio Salado College is headquartered in the east valley, it is not included as a service area because it provides services throughout the metropolitan area. However, the information and conclusions presented here will still have meaning for Rio Salado’s many programs, activities, and locations.

Today, the need for strategic planning is critical. Institutions must use a deliberate combination of data, experience, and foresight just to stay in step. In a recent national study sponsored by the National Center for Public Policy and Higher Education, business leaders and higher education administrators and professors agreed that colleges and universities are facing some tough financial times.¹ But, more than dollars will define the challenges to come. Like every public and private entity today, community colleges must cope with intense competition and rapid change. In this age of the customer, people’s expectations are rising, and choices abound for everything. At the same time, policy makers are often calling for more accountability for the public’s funds,

but providing less support. While a positive image (or the trendier strong “brand”) provides a critical foundation, tradition and good feelings are insufficient to insure future growth or even continued relevance.

Methodology

Emerging Trends, Future Directions provides information in four major areas and presents some concluding thoughts:

- State and Local Growth
- Service Area Analysis
- New Economy and the Future of Work
- Learning and Learners

This scan is meant to provide insight into pertinent trends and to be a springboard to further research. Data were collected through interviews and reviews of materials ranging from scholarly reports to local newspapers. Sources such as the U.S. Census Bureau and other federal departments, a number of state and regional agencies, including Arizona State University’s Center for Business Research, the Arizona Department of Economic Security Research Administration, and Maricopa Association of Governments were used. Definitions and methodologies often differ among these and other sources. Nonetheless, together they are good indicators of emerging trends. Quotations from various publications (shown in italics) augment the facts and figures.

This compilation is not the first or only one of its kind for the institutions involved. This report is intended to supplement those previous efforts. Also this text contains primarily conclusions and examples. More detail on some of the topics may be found in Appendix A.

Community colleges have come closer than almost any other institution to being all things to all people. But, this very strength can make it challenging to set clear priorities. *Emerging Trends, Future Directions* utilized the major ways in which community colleges interact with their communities as a framework for decisions on data and the presentation of information. The material in the following pages relates to one or more of the following community college roles:

Educator-Trainers

Community colleges are a cornerstone of Arizona’s education and training system. They serve both businesses and individuals with short and long-term programs and services. Community colleges also bridge the opportunity gap between Arizona’s “have nots” and its “haves.”

Amenities

Community colleges contribute to the entire region’s quality of life. From rose gardens, public radio, distinctive architecture, and public art to partnerships and extension classes, colleges create relationships with residents of all ages, interests, and incomes.

Anchors

Community colleges have a significant presence in specific locations. They are high-profile presences in particular neighborhoods and occupy large spaces literally and figuratively. As such, they have a special connection to a particular area – they help provide a sense of place.

Planning and Community Life

The future of metro Phoenix and the best strategic directions for the region have been prominent topics of late in government and private circles. For example, Maricopa Association of Governments recently completed its Valley Vision 2025 process, and Morrison Institute for Public Policy provided recommendations for success in the new economy. Governor Hull's blue ribbon task forces on higher education and the new economy are in the process of determining their initiatives. These efforts are concerned with many of the same facts and trends as this report. Further, the major points in this scan will probably be familiar to anyone who reads the newspaper. Each day's edition reminds us how work, family, and communication are evolving and of the challenges and opportunities the changes present to institutions. For example:

- The new economy is real and present. The business section chronicles the growth of new enterprises and networks, as well as the reinvention of traditional industries. Lifelong education, skills, and creativity are discussed repeatedly as the keys to success.
- The bulging want ads illustrate the continued vibrancy of the job market and the resulting low unemployment and high consumer confidence. Forecasts anticipate additional economic growth.
- Competition is a defining factor for business and individuals.
- Fundamental to everything, technology is much more than a beige box on the desk. The Internet is changing day-to-day life from shopping, news, and investing to continuing education and new job skills for more and more people. Even the "digital divide" reportedly is fading as prices for computers and access fall.
- The baby boom generation is aging, and the first digital generation is about to take center stage.
- Everyone is pressed for time. A frenetic pace that puts a premium on service and simplicity is a feature of most households. From parents to business people to students, everyone is asking: How many things can I do at once? How does this work for me?
- Growth is inevitable throughout Arizona, but attitudes about more new residents seem to have shifted. A sense of place and quality of life really matter to those who live here. Neighborhoods are organizing and older areas are moving to redevelop and revitalize.
- The number and influence of Hispanics and Native Americans is increasing. Hispanics especially are a potent "market" in metro Phoenix now with new television stations, an Internet portal, and more newspapers.

STATE AND LOCAL GROWTH

The 1990s brought an unprecedented surge of growth to Arizona and its metro areas. Arizona's population swelled by 1.25 million and will surpass five million next year. Metro Phoenix (Maricopa County and recent additional portions of Pinal County) added nearly 840,000 and surpassed the three million mark in early 1999, while Metro Tucson added nearly 200,000 for a mid-1999 count of almost 850,000.

Arizona's Economy, January 2000

Population Trends

Growth Projections

Throughout the 1990s, Arizona, and its cities and counties, repeatedly ranked among the fastest growing in the nation. Projections indicate that within the next 10 years, the state's population will swell to over 6 million, with almost 4 million living in Maricopa County. If these projections hold, the population will have almost doubled in 20 years.

Maricopa County grew by almost 1 million people between 1990 and 1999. Increases in Maricopa County account for more than 60 percent of the state's growth. Overall, the county's share of Arizona's population increased from 51 percent in 1960 to nearly 60 percent in 1999. Not surprisingly considering the high levels of job creation, growth in the metro region during the current economic cycle (which began in 1992) has outpaced everything in the past. However, increases are expected to moderate somewhat during the remainder of this economic cycle.²

Also during the 1990s, east valley cities have been some of the state's growth leaders. Between 1990 and 1999, Gilbert's population increased 246.3 percent, while Chandler grew by 88.1 percent. Mesa and Queen Creek gained 30 and 36.3 percent more residents respectively. Tempe's 14 percent growth seems small in comparison, but the double-digit change would be notable in many other cities. Tempe's land-locked geography has left less room for growth than in the more land-rich cities. The Arizona Department of Economic Security's current population estimates show that together Chandler, Gilbert, Mesa, Queen Creek, and Tempe account for 28 percent of Maricopa County's residents. As shown in Table 1, the state, county, and cities are expected to continue to grow over the next decade.

Table 1: Arizona, Maricopa County and East Valley Population, 1990-2010

	Arizona	Maricopa County	Chandler	Gilbert	Mesa	Queen Creek	Tempe
1990	3,665,000	2,122,101	89,862	29,122	288,104	2,667	141,993
1995	4,217,940	2,551,765	132,360	59,338	338,117	3,072	153,821
1999*	4,924,350	2,913,475	169,000	100,850	374,560	3,635	161,995
2010**	6,145,108	3,710,000	221,664	174,690	540,609	13,965	174,769

*DES Estimate **DES Projection for Municipal Planning Area

Sources: Greater Phoenix Economic Council *Fact Book* and 1995 Special Census

Arizona Department of Economic Security Population Statistics Unit, August 1997 and December 1999

Race and Ethnicity Trends

In the 1950 census, America was 89 percent white and 10 percent Black. Other races hardly got a look-in. Now Latinos account for around 12 percent of the population. Within the next five years, they will overtake Blacks to become the largest minority.

The Arizona Republic April 4, 2000 from *The Economist*

Recent estimates for Arizona and Maricopa County peg minority population at 31.9 percent and 27 percent respectively. The number of Hispanics in Arizona grew by half during the 1990s (345,484 or 50.2%), surpassing 1 million in 1998. Hispanics accounted for 22.1 percent of the state's population, up from 18.8 percent in the 1990 census. More than half of the Hispanic growth occurred in Maricopa County. Native Americans are the state's second largest minority after Hispanics. Maricopa County is home to more Native Americans than any other county.

As shown in Table 2, the east valley remains primarily white, but each city has a notable minority population. The cities' total minority population including African-Americans, Native Americans, Asian/Pacific Islanders, and Hispanics ranges from a high of 40 percent in Queen Creek to a low of 17 percent in Gilbert.

Table 2: Race and Ethnicity – Maricopa County and East Valley Cities, 1995

	Maricopa County	Chandler	Gilbert	Mesa	Queen Creek	Tempe
White	71.9%	73.3%	83.2%	78.9%	60.0%	74.9%
African-American	3.5%	2.7%	1.8%	2.3%	2.8%	3.3%
Native American	1.5%	0.9%	0.5%	1.2%	0.9%	1.5%
Asian/Pac.Is.	1.9%	3.0%	2.6%	1.6%	0.7%	4.7%
Other	0.7%	0.8%	0.7%	0.6%	0.2%	1.0%
Hispanic origin*	20.5%	19.3%	11.2%	15.5%	35.3%	14.7%

Hispanic may be of any race.

Sources: Greater Phoenix Economic Council *Fact Book* 1999 and 1995 Special Census

In the year 2030, one out of four Americans will be either Hispanic or Asian.
Milken Institute, March 2000

Milken Institute, a California-based think tank, ascribes many of the 21st century's demographic changes to immigration from Latin America and Asia. These new residents will tend to cluster in a relatively small number of places, especially 21 "melting pot metros." The message for Phoenix is somewhat mixed in this report. On one hand, Phoenix does not appear on the melting pot list, which includes cities as disparate as Miami and Waco, Texas. In addition, Phoenix ranked 3rd in domestic migration, and Phoenix and Atlanta had the greatest gains in the white population during the 1990s. Metro Phoenix placed 8th among 10 metro areas for gains in Hispanic population. On the other hand, the Hispanic gains in metro Phoenix between 1990 and 1998 stood at 217,710 for an estimated total of 601,356.³ Phoenix has experienced notable gains in numbers and percentage terms and is anticipated to serve increasingly as a major center for Hispanic immigrants.⁴ Immigrant populations will over time move beyond the primary gateway metro areas such as Los Angeles to affect neighboring metro areas.

Generations

The articles are everywhere. Baby boomers are aging and will soon begin to retire in large numbers. The “pig in the python” in the U.S. demographic picture is getting older and soon will be gray. See Figure 1 for a demographic who’s who.

Figure 1: Demographic Who’s Who

- **GI Generation**—born before 1930 and now in their 70s and beyond
- **Depression**—born between 1930 and 1939 and now between 61 and 70
- **Baby Boomers**—born between 1946 and 1964, but better understood as Early Boomers—born between 1946 and 1955 (now aged 45-54) and Late Boomers—born between 1956 and 1964 (now about 35-44)
- **Baby Busters or Generation X**—born between 1965 and 1976 and now about 24-35 years of age
- **Echo Boom or Generation Y**—born after 1978 and about 70 million strong in the U.S.

For the third consecutive winter, fewer snowbirds are flocking to the Valley. The World War II generation pushed the Valley’s retirement industry into overdrive the past two decades. But illness and death are depleting their ranks, and the number of occupied spaces in RV resorts is down. But next year, the first baby boomers turn 55, which makes them eligible for age-restricted retirement parks. Besides demographic changes, the most commonly cited factors in the decline are worsening Valley traffic and air, higher prices, the disappearing desert, lower Canadian exchange rates and Canadian public health-insurance limits.

The Arizona Republic, February 13, 2000

A Youthful Place

Maricopa County is somewhat younger than the nation as a whole thanks in part to the large number of young adults who have moved here and higher birth rates among minority groups. In fact, the number of births annually has been increasing. The 80,000 births in Arizona in 1999 set a record for the state. Last year, Maricopa County recorded 51,000 births—3,000 more than in 1998.

As shown in Table 3, 1995 Special Census figures underscore the area’s youthfulness. For example, Chandler, Gilbert, and Queen Creek lead in residents under the age of 18. Chandler, Gilbert, and Tempe have the greatest number of working-age adults, 22-54 years old. Mesa has the oldest population.

Table 3: Ages in Maricopa County and East Valley Cities, 1995

	Population	% < 5	% 5-17	% 18-21	% 22-54	% 55+
Chandler	132,360	9%	22%	4%	54%	12%
Gilbert	59,338	10%	25%	4%	52%	8%
Mesa	338,117	8%	20%	6%	46%	19%
Queen Creek	3,072	8%	31%	6%	43%	11%
Tempe	153,821	6%	16%	11%	55%	13%
Maricopa County	2,551,765	8%	19%	5%	48%	19%

Percentages may not total 100 due to rounding.

Source: 1995 Special Census

More Workers and Students

As shown in Table 4, the youth of the east valley means that more residents identify themselves as workers and students than in the county as a whole. The percentage of retired residents is understandably lower than the county, except in Mesa.

Table 4: East Valley Age and Activity Overview, 1995

	Population	Median Age	Working	Student	Retired
Chandler	132,360	30.6	48%	22%	6%
Gilbert	59,338	29.7	47%	25%	5%
Mesa	338,117	32.0	43%	21%	15%
Queen Creek	3,072	26.5	38%	28%	6%
Tempe	153,821	29.3	48%	26%	8%
Maricopa County	2,551,765	33.2	42%	20%	14%

Percentages may not total 100 due to rounding and presentation of selected activities.

Source: 1995 Special Census

Generation X helped popularize the Internet by making it more accessible; Generation Y will define how we integrate it into everyday life.

American Demographics, May 2000

The aging baby boom generation will bring as many challenges to the east valley and metro Phoenix as to other parts of the U.S. The Milken Institute in its recent report on 21st century demography⁵ reviews the stresses that will be caused by the elderly population increasing by 80 percent in the next 25 years. In addition, it describes the “aging in place” trend, particularly in the high-migration areas of the west and south. Rather than moving at or directly after retirement, people are expected to tend to stay in the state that they reside in when they stop working. This may present a change from the substantial older in-migration to the Phoenix metropolitan area in recent years. According to the Milken Institute, Phoenix ranked 21st among 30 metro areas on elderly growth between 1990 and 1998.

Migration and Growth

Migration is responsible for more than two-thirds of Arizona’s population change.

Population Estimates and Projections, Arizona State University, December 1999

Migration is the most significant factor in the state’s growth, and virtually every institution has been affected by the steady stream of people moving into, around, and out of the state.

- Net inflows to Maricopa County have been dominated by those aged 20-29 (followed by 30-39 year olds) with only a slight increase for retirement ages. As seen in the 1995 Special Census, “twenty-somethings” remained the main source of new residents.⁶
- Overall, in-migration has been highest among those who are 20-24 and 60-69 years old.
- Most of Arizona’s new residents come from California and other neighboring states such as New Mexico, Colorado, or Nevada. Texas, Illinois, and New York also provide many newcomers. But, for every three people who move to Arizona, about two move out.

Those leaving Arizona tend to go to other western states, especially California. Those who are 25 to 34 years old are the most mobile.⁷

- Despite the county's retirement reputation, seniors make up a smaller share of the population here than in other parts of Arizona. Metro Phoenix's elder population is comparable in proportion with that in the rest of the country. However, senior residents in Maricopa County tend to be concentrated in certain parts of the metro region.
- Movement within metro Phoenix contributes to the area's churning feeling. Especially as interest rates dropped, many current residents moved to different areas in the metropolitan region. In 1994, 23.8 percent of household heads in Phoenix metro moved and 17.0 percent moved within the metropolitan area.⁸
- While migration is the largest contributor to state and local growth, natural increase (births minus deaths) is also a factor. Maricopa County's fertility rate of 2.41 is above the replacement level. Figures for 1996 show fertility rates (number of births per 1000) for non-Hispanic whites and Asians at 1.86, while for Blacks the number is 1.93. Hispanics have the highest rate at 4.26. Thus despite the prominence of migration, momentum for growth is built into the county's fertility structure and the sheer size of the current numbers.⁹

Migration stimulates economic growth, which in turn stimulates more migration. To be sure, there are times when these engines of growth slow down, but their positive feedback systems are so strong that it is difficult to see anything but moderate to high population growth in the Valley's future.

Growth in Arizona: The Machine in the Garden, Arizona Policy Choices, October 1998

How Arizona Ranks Nationally

In 1999, Arizona ranked 20th in population in the U.S., up from a rank of 24th in 1990. The percent of the population under age 18 went from 13th in 1990 to 10th in 1998. Changes in rankings on other demographic and economic indicators show some significant challenges for educators and policy makers. For example, Arizona ranked:

- 6th in 1998 for the percent of the population living below the poverty level (19th in 1990)
- 14th on violent crime in 1997 (17th in 1990)

There was no change in rank during the decade for such indicators as the percent of the population living in metropolitan areas (9th), the percent of the population 65 and older (21st), average annual pay (25), or per capita income (35). (See Appendix A.)

Development Trends

Homeownership

It is within our power to create places that are worthy of our affection.

James Kunstler

Overall about 65 percent of Maricopa County’s housing units are owner occupied. Although mortgage rates and housing costs are currently rising, the east valley (and metro Phoenix as a whole) still tends to have a relatively low cost of living and a high rate of homeownership. The rate of homeownership in the east valley is greatest in Gilbert at 80 percent, and lowest in Tempe at 52 percent. The number of renters is exactly reversed with Tempe highest (due to the influence of students at Arizona State University) at nearly 50 percent and lowest in Gilbert. The number of persons per household, as shown in Table 5, also varies from below the county figure in Tempe to considerably above in Queen Creek, Mesa, Chandler, and Gilbert. Again, ASU’s presence tends to reduce Tempe’s household size, while the family orientation of the other cities accounts for the higher figures. On cost of living, Mesa is the lowest of the five east valley cities at 73 (100 is the nationwide average), while Tempe is the highest at 99.

Table 5: Persons Per Household, 1995

	Persons per Household
Chandler	2.87
Gilbert	3.14
Mesa	2.67
Queen Creek	3.49
Tempe	2.46
Maricopa County	2.62

Source: 1995 Special Census

Land and Houses

Shepherders separated lambs from ewes Tuesday in an alfalfa field southeast of Chandler, as one family’s agrarian lifestyle gave way to an ever-growing demand for developable land in the East Valley.

The Arizona Republic, April 19, 2000

Cities, of course, grow in area in addition to people. In the east valley, as in all of Maricopa County, new housing is overwhelmingly single-family. “Land consumption rate” (LCR) is a technical term for the amount of land consumed per 1,000 people. A small LCR means that less land is being used to fulfill the population’s needs. For the east valley cities, Gilbert tends to use more land than other areas, while Chandler is accommodating more people with less. Tempe, not surprisingly, is using the least amount of land for its residents.

Another specialized measure gauges the change in urban land area per 1,000 new residents. Its usual purpose is to measure how quickly rural land is being converted to urban uses. Between 1990 and 1995, Gilbert again led in the amount of land that turned from rural to urban (each new 1,000 people consumed .24 square miles of new urban land). In contrast, Chandler used .09 square miles.¹⁰

Residences are indeed coming up quickly in the east valley’s farm fields and vacant lots, and single-family homes are the norm. In each city and throughout Maricopa County, single-family homes account for the bulk of new housing. In 1999, as shown in Table 6, Mesa led the way in new houses, followed by Gilbert. Single-family homes in the east valley counted for slightly over 30 percent of the county’s total.

Table 6: Residential Permits in East Valley Cities, 1999

	1 Family	Mobile Homes	Duplex	3-4 Family	5 or More	Total
Chandler	2,730	0	4	0	117	2,851
Gilbert	2,742	1	0	0	297	3,040
Mesa	5,147	0	12	59	2,083	7,301
Queen Creek	204	0	0	0	0	204
Tempe	296	0	2	4	409	711
Maricopa County	35,430	2,447	132	304	9,093	47,406

Source: Arizona Real Estate Center, Arizona State University College of Business

Chandler and Gilbert each reported approximately six percent of the residential permits in Maricopa County. Mesa had the largest percentage at 15 percent; Queen Creek and Tempe each accounted for less than one percent.

Moving Southeast

While the entire east valley has experienced significant growth for three decades, the southeastern-most portion of the area appears to be the future growth hotbed. Aerial photographs (produced by Landiscor) used to track building trends provide a sense of the patterns of future east valley growth. Photos created on December 30, 1999 and January 3, 2000 and related home start and new development data confirm that development is moving, and will continue to move, east and southeast. However, the southeast portions will see the bulk of the development. The summary in Figure 2 shows the combined figures for all of the maps relevant to the east valley, using Baseline Road as the north-south divide designating the “southeast” area. Varying methodologies and sources account for different figures in Table 6 and Figure 2.

Figure 2: Housing Past and Future*

•12-Month Housing Starts

8,076
30% North of Baseline Road
70% South of Baseline Road

•Total Vacant Lots**

18,150
23% North of Baseline Road
77% South of Baseline Road

•Future Residential Communities

10,659 Lots
8% North of Baseline Road
92% South of Baseline Road

Source: Landiscor Phoenix Real Estate Photo Book, Fourth Quarter 1999 and The Meyers Group

*Areas of southeast valley that correspond approximately with service areas of MCC at Southern and Dobson, MCC at Red Mountain, Chandler Gilbert Community College, and Williams Center. City of Phoenix areas not included.

**Improved and unimproved lots in existing areas.

The southeast portion of the east valley will capture much of the new housing in the next couple of years. Meanwhile, lower than anticipated student growth in the northeast portion of the east valley was noted in an interview with research personnel at Mesa Unified School District. Staff

members noted that the district is planning on building only one more junior high school, and that the northeast Mesa area has not generated the number of students traditionally anticipated from a new housing area.

Building just across the border between Maricopa and Pinal counties is beginning to raise alarms among east valley cities. Mesa and Queen Creek planners particularly are watching projects that could bring as many as 200,000 people to the vicinity over the next decade or two. The 4,400-home Johnson Ranch is one area of concern.

Waves of Growth

Growth is often referred to as “marching” or “rolling” through an area. With the valley’s flat terrain and former farm fields, development is fairly easy. In each new area, home construction triggers a boom that often results in thousands of new people arriving in a short period, a shortage of services, and overcrowding of schools. Jobs and retail services follow the people (as evident in Chandler with such areas as the Chandler Fashion Center). As the area is “built out,” growth rolls on to the next area.

The areas of Tempe, Chandler, and Ahwatukee illustrate well how growth comes and goes. As detailed in this excerpt from an *Arizona Republic* story, after years of coping with the need to build schools rapidly and the reality of too many students, the Kyrene School District must now deal with fewer new students as neighborhoods within its boundaries are completed.

The Kyrene School District, whose biggest problem has been figuring out how to squeeze a growing number of students into its schools, is suddenly faced with a new problem: slow growth. For the first time since 1888, the number of new students entering the 23-school district is leveling off, officials say. Arizona schools are funded on a per-student basis, so that translates into a painful slowing of funds. The district’s 23 elementary and middle schools are scattered throughout the Chandler, south Tempe, and Ahwatukee areas, some of the fastest growing parts of the Valley in the past decade. Its student population has doubled to almost 20,000 since 1990. Often, more than 1,000 new students would come through its doors each year. This year, only 100 new students are projected. Though some of its schools still struggle with overcrowding, more are in neighborhoods that are finally built out. There’s also unprecedented competition from charter and private schools luring some families away.

The Arizona Republic March 7, 2000

Some places that are still expanding rapidly or are anticipated to be one of the next “hot” areas, such as southeast Chandler, are changing planning practices to mitigate some of growth’s steamroller effects and preserve a less urban lifestyle.

On the other hand, many of yesterday’s new neighborhoods are now showing signs of age. East valley residents’ attention is increasingly turning to revitalization, not just in historic areas (such as districts in downtown Mesa), but also in neighborhoods built in the 1960s and 1970s.

The subdivision of modest block homes was built during a five-year period starting almost 22 years ago when the Superstition Freeway ended at Country Club, and Alma School was only a two-lane road. But now the neighborhood has reached that critical age when shingle roofs start crumbling, paint fades and people who can't afford repairs start giving up. Instead of giving into neighborhood decay, Alma Jones began pulling the neighborhood together.
The Arizona Republic April 4, 2000

Downtown Mesa, Chandler, and Gilbert are working to follow downtown Tempe to new prosperity. All three see reversing the decline in their cores as important to their long-term quality of life. Mesa recently completed a new streetscape downtown and is investing in a new performing arts center. Chandler is seeking to revive a Frank Lloyd Wright plan for its center. These efforts have substantial price tags and challenges, but, as has been shown elsewhere in metro Phoenix, the return is worthwhile in both financial and quality of life terms.

When Chandler residents talk about the future of their downtown, they usually focus on the square around A.J. Chandler Park and the businesses along Arizona Avenue. That attitude ignores the residential blocks that radiate east and west from the city center. These largely Hispanic neighborhoods contain Chandler's highest concentration of poor families and aging houses. *The East Valley Tribune*, March 12, 2000

OVERVIEW OF COMMUNITY COLLEGE SERVICE AREAS

Quality of Life

While state and regional trends are informative, it is important to understand local differences as well. East valley cities are often typecast as homogenous bedroom communities. But, the five cities discussed here are real places where residents are concerned about some aspects of east valley life and satisfied with others. Morrison Institute for Public Policy's annual survey describes attitudes towards quality of life.¹¹

- Sixty-six percent of southeast valley residents thought the region's quality of life was excellent or good in the 1999 survey, a figure essentially identical to that for the entire metropolitan region.
- A strong majority of southeast valley residents said they felt a sense of community in their neighborhoods.
- Over half of the southeast valley respondents thought the overall quality of city/town government was excellent or good.
- Job satisfaction for southeast valley respondents increased dramatically over three consecutive years; 52 percent said they were very satisfied in 1997, 57 percent in 1998 and 84 percent in 1999.
- In 1998, three quarters of southeast valley respondents rated the schools their children attend as excellent or good. In contrast, the metro area's schools were viewed as good or excellent by less than half of the southeast respondents.
- In the 1997 study, one third of southeast valley residents rated the region's community colleges and universities as excellent. In 1998, 43 percent said excellent.
- Fully 90 percent of southeast residents said traffic is getting worse.

Quality of Life Issues: 1999 Ranking

In a metro-wide survey, residents were asked to rank the importance of the following quality of life categories.

- Public Safety and Crime (35%)
- Education (19%)
- Families and Youth (12%)
- Economy (11%)
- Healthcare (8%)
- Environment (5%)
- Community (4%)
- Transportation/Mobility (3%)
- Arts, Culture, and Recreation (2%)

Source: ***What Matters in Greater Phoenix: Indicators of Quality of Life***
Morrison Institute for Public Policy, 1999

Maricopa Association of Governments Data

In 1999, Maricopa Association of Governments (MAG) prepared the *Maricopa Community Colleges Planning Data Set*¹² to illustrate planning issues for the district's colleges. The maps provided economic, demographic, and land use characteristics, and presented growth projections. The information generally dates from the 1995 Special Census and MAG's 1997 projections. The following items were summarized for the east valley community colleges.

- **The east valley is essentially residential with commercial areas along freeways and major streets.** Industrial land is located primarily around Williams Gateway Airport, along freeway corridors, along the Salt River and adjacent to the Salt River Pima Maricopa Indian Community. Industrial uses are slated to increase substantially in Chandler along the I-10 and San Tan Freeway alignments. Commercial growth will generally increase in existing areas and follow new housing.
- The line between residential and agricultural land in the southeast and the constraints to expansion in the northeast, (Tonto National Forest and the Salt River Pima Maricopa Indian Community) are clearly visible. **Growth is projected to continue along freeway corridors to the east, but the bulk of the available land remaining in this part of Maricopa County is in the southeast.**
- Job growth tends to radiate out from central cities. Current employment density is greatest in the MCC at Southern and Dobson area and in northeast Mesa around Falcon Field. **In the next two decades, employment growth is expected to be most substantial along freeway corridors.** Chandler-Gilbert and Williams particularly will see substantial employment growth in their areas with additional manufacturing and other facilities.
- **Minority populations are largest in the areas around MCC at Southern and Dobson and Chandler-Gilbert Community College and in the far southeastern portion of Maricopa County.** Each of the service areas, except Red Mountain, has several residential pockets where minorities account for at least thirty percent of residents. These areas tend to be in established, downtown districts. Hispanic residents are the most prevalent minority with cores to the north and east of Southern and Dobson campus, in the downtown Chandler area and south of the Chandler-Gilbert campus, and in the far southeast corner of the county.
- **The service areas generally show 20-40 percent under 18 years of age.** MCC at Southern and Dobson has the largest proportion of 18-21 year olds.
- **MCC at Southern and Dobson, MCC at Red Mountain, and Chandler-Gilbert CC have pockets of poverty close to their campuses.** For Southern and Dobson and Red Mountain, the corridor between University and Broadway has 10-25 percent in poverty and correspondingly low education levels. For Chandler-Gilbert, established areas have the greatest poverty levels. Around CGCC and Williams, significant numbers of residents have less than a high school diploma.

Additional Data for College Service Areas

Overview

Data for each of the service areas were collected from a variety of sources to augment that prepared by MAG. Service area data were obtained from CACI Marketing Systems, a national firm that utilizes census data to prepare special area reports and projections. In addition, zip codes were grouped to represent the service areas generally*. (See Appendix A for zip code assignments.). The following tables provide population and other information for 1990-2004 in each college service area. As shown in Table 7 and Table 8, the east valley's growth and development during the past ten years are reflected in the service areas.

Table 7: Population, Households, and Families in Four Service Areas, 1990-2004

	MCC S/D 1990	MCC S/D 1999	MCC S/D 2004	MCC R M 1990	MCC R M 1999	MCC R M 2004	C-G 1990	C-G 1999	C-G 2004	W C 1999	W C 1999	W C 2004
Pop.	434,847	542,498	605,114	124,494	184,280	216,223	99,162	182,773	229,394	23,342	49,170	65,236
HHs.	163,078	210,633	240,419	49,845	76,672	91,991	32,990	62,720	80,438	7,346	16,779	22,895
Fam	104,804	131,528	147,461	36,812	55,358	65,431	25,294	47,921	61,031	6,251	13,996	18,916

HH refers to number of Households. Fam refers to number of families.

Source: 1990 U.S. Census of Population and Housing; CACI Forecasts 1999 and 2004

Table 8: Service Area Basic Profile, 1990-1999

	MCC S/D 1990	MCC S/D 1999	MCC R M 1990	MCC R M 1999	C-G 1990	C-G 1999	W C 1990	W C 1999
Med. Age	28.6	29.1	39.8	42.0	28.2	28.5	29.7	33.5
HH Size	2.63	2.53	2.48	2.39	2.99	2.89	3.09	2.90
Med. HH Income	\$31,481	\$39,769	\$29,606	\$37,759	\$36,241	\$46,948	\$37,664	\$52,659
White	87%	82%	95%	93%	85%	81%	88%	87%
Hispanic*	13%	18%	6%	9%	18%	24%	13%	17%
African-Amer	2%	3%	1%	1%	2%	3%	2%	1%
Asian-Pac.Is.	3%	4%	1%	1%	2%	3%	1%	2%

Med refers to median. HH means household. Income presented in current dollars. Count for Hispanic may be duplicated. Thus, percentages total more than 100.

Source: 1990 U.S. Census of Population and Housing; CACI Forecasts 1999 and 2004

* Note that in some cases the zip code areas may be larger than the six-mile areas. Because of overlapping service areas, zip code data may be included in more than one service area.

Incomes Low and High

As seen in Table 9, the service areas include a range of incomes, as shown also in the cities' special census median incomes. Gilbert and Chandler have the highest median incomes (\$51,660 and \$46,096 respectively), while Tempe (\$36,049), Mesa (\$33,676), and Queen Creek (\$43,429) follow¹³. All of the east valley cities, except Mesa, exceed Maricopa County's median income (\$35,623).

Each service area has affluent residents and pockets of low-income, often disadvantaged, households. The pattern seen in the number of households with annual incomes under \$15,000 holds true for such other indicators as cash assistance, Food Stamps, and child care subsidies. MCC at Southern and Dobson has the greatest number of low income and public assistance households, followed by Red Mountain, Chandler-Gilbert, and Williams. These percentages are very consistent with data derived from 1990 census reports. Thus, while the numbers have changed, the proportion of impoverished residents has remained quite stable.

In terms of location, four zip codes in the MCC at Southern and Dobson area account for half of the service area's cash assistance cases (the cases cover about 5500 adults and children), according to the Arizona Department of Economic Security. These are the same older areas shown to have a higher incidence of poverty in the *Maricopa County Community College Planning Data*. MCC at Southern and Dobson has more than four times the number of cash assistance recipients as the next highest service area and the largest number of Food Stamp recipients.¹⁴ At the same time, MCC at Southern and Dobson has more high-income households than might be expected. Further south, new upscale housing developments and additional high-wage jobs most likely account for the affluence in the Chandler-Gilbert areas.

Table 9: Service Area Income Overview, 1990-1999

	MCC Southern/ Dobson 1999	MCC Red Mountain 1999	Chandler- Gilbert 1999	Williams Center 1999
<\$15,000	13%	13%	9%	8%
\$15,000-\$34,999	29%	32%	25%	22%
\$35,000-\$49,999	20%	22%	21%	18%
\$50,000-\$74,999	21%	20%	25%	27%
>\$75,000	16%	13%	21%	26%

Percentages may not total 100 due to rounding.

Source: 1990 U.S. Census of Population and Housing; CACI Forecasts 1999 and 2004

Service Area Ages

Table 10 shows changes over time in the age distribution in each service area. The figures underscore the youth of MCC at Southern and Dobson and Chandler-Gilbert, the older population for Red Mountain, and a shift upward in the Williams area.

Table 10: Service Area Ages, 1990 and 1999

	MCC Southern Dobson 1990	MCC Southern Dobson 1999	MCC Red Mt. 1990	MCC Red Mt. 1999	Chandler - Gilbert 1990	Chandler - Gilbert 1999	Williams Center 1990	Williams Center 1999
< 5	8%	9%	7%	7%	10%	11%	9%	8%
5-24	34%	34%	23%	23%	32%	34%	32%	32%
25-64	51%	49%	44%	43%	51%	50%	49%	49%
>65	7%	8%	26%	26%	4%	6%	9%	11%

Percentages may not total 100 due to rounding.

Source: 1990 U.S. Census of Population and Housing; CACI Forecasts 1999 and 2004

Educational Levels

For the five east valley cities and the city of Phoenix, the figures in Table 11 reveal the near universality of a high school diploma and the sizable percentage of residents with bachelors degrees. But as with incomes, portions of the service areas have lagged in educational attainment. For example, educational attainment figures for those over 25¹⁵ for zip codes in the MCC at Southern and Dobson area show that the number of people without a college degree (AA to graduate) ranges from 39 percent to almost 80 percent. Chandler-Gilbert ranges from 57 to 85 percent with less than a degree. Williams runs from 61.4 percent to 84 percent, while Red Mountain goes from 64 percent to 95 percent.

The percentages for the number with an associates degree or beyond have a similar pattern. In the MCC at Southern and Dobson zip codes, 21 percent to 61 percent have a degree. In Chandler-Gilbert, the figures range from 15 percent to 43 percent. Williams runs from 15 percent to 38 percent, with Red Mountain ranging from 5 percent to 36 percent.

Table 11: Educational Attainment in Phoenix and East Valley Cities

	% H.S. Grad.	% Bach. Degree
Chandler	86%	26%
Gilbert	91%	29%
Mesa	85%	21%
Tempe	90%	37%
Phoenix	79%	20%

Source: Yahoo Real Estate VirtualRelocation.com

Schools and Service Areas

Elementary and secondary schools in the service areas are operated by the Mesa Unified School District, Chandler Unified School District, Gilbert Unified School District, Tempe Union District, Tempe Elementary School District, and the Kyrene Elementary School District. As shown in Table 12, each service area includes schools for all ages and of various types from neighborhood facilities to alternative schools.

Table 12: Schools in Community College Service Areas

	MCC Southern/Dobson	MCC Red Mountain	Chandler-Gilbert	Williams Center
Elementary Schools	72	22	35	13
Middle Schools	5	0	1	1
Junior Highs	10	5	6	3
High Schools	12	4	5	3
Special District	6	3	2	2

Source: Arizona Department of Education School Report Cards, Zip Code Data 1999 and 2000

In addition, charter schools are prominent in the service areas. At least 57 charter school locations may be found in the east valley service areas, according to data published by the Arizona Department of Education. Throughout the state, the education department counts as many as 507 locations. Each location may not denote a separate school, since one institution may have multiple facilities.

Resident Profiles

With residents having so many choices for everything, knowing as much as possible about them is important. The following profiles of service area residents were created with information from CACI Marketing System’s ACORN “segmentation” system. These profiles are intended to describe the major types of people who live in a particular area. The descriptions detail common characteristics among groups of an area’s residents, but they do not necessarily describe everyone in the area. Table 13 shows the categories of people prevalent in each service area. The categories and their components are described below. The data are presented for percentages of households, rather than for percentages of population.

Table 13: Service Area Profiles

ACORN Segment	MCC Southern Dobson	MCC Red Mountain	Chandler- Gilbert	Williams Center
Affluent Families	26.6%	32.8%	56.6%	55.0%
Retirement Styles	6.2%	50.5%	0.3%	24.4%
Up and Coming Singles	20.1%	0.7%	13.6%	0.0%
Upscale Households	16.9%	1.7%	8.8%	0.7%
Young Mobile Adults	12.9%	0.0%	0.0%	0.6%
City Dwellers	11.6%	0.0%	12.6%	2.4%
Factory and Farm Communities	4.8%	14.2%	8.0%	16.1%

Percentages may not total 100 due to rounding and deletion of very small categories.

Source: CACI ACORN Neighborhood Segmentation System

Affluent Families

The Affluent Families category is comprised of seven different groups, but three—Prosperous Baby Boomers, Semi-Rural Lifestyle, and Successful Suburbanites—are relevant for the community college service areas. The Prosperous Baby Boomers component is largest for all of the areas.

Prosperous Baby Boomers

This portion of baby boomers tends to have young children and be suburban homeowners. They have incomes above the U.S. median and high levels of education. Generally two-worker families, these residents are computer literate and technologically savvy.

Semi-Rural Lifestyle

These married couples with and without children at home live in less-dense portions of metropolitan areas or in semi-rural areas. They have chosen new homes. Employment is high among this group, but the sources are more diverse than for other groups and are more likely to include self-employment. “Home” is very important to this group for whom political and civic group membership is common.

Successful Suburbanites

This group is a bit older and more affluent than the baby boomers, but still with school-age children. Dual incomes have made it possible to move to new areas with many amenities. This workforce is professional, well educated, and mobile.

Retirement Styles

Important especially for Red Mountain and Williams, this category includes three relevant components, including: Wealthiest Seniors, Senior Sun Seekers, and Retirement Communities.

Retirement Communities

These residents are older, but not always elderly. The “communities” referred to may or may not be the retirement developments common in metro Phoenix. Housing mix usually includes single-family homes and congregate housing. The labor force is small but generally well educated.

Wealthiest Seniors

Over half of this population is beyond 50 years of age; over 30 percent is 65 or older. Half of the households are married couples. This component is small but highly affluent. This is the top market for investments and saving. Homes are generally owner occupied, and a high proportion is seasonally occupied. This is an active market with expendable income.

Senior Sun Seekers

This is the oldest of the retirement styles. They have lower incomes than some other senior groups, but it is highly disposable. Mobile and single-family homes are most common, again with a fairly high seasonal factor. These residents have time and money and spend it golfing, traveling, playing cards, doing needlework, and gambling in casinos and on lottery tickets.

Up and Coming Singles

This category spotlights Enterprising Young Singles in the service areas.

Enterprising Young Singles

The population is mobile and often earning more than the U.S. median. Labor force participation is understandably high, and renters are dominant. Fitness is a priority in their active lifestyles.

Upscale Households

Baby boomers are prominent in this category, as illustrated by the component Baby Boomers with Children.

Baby Boomers with Children

About two-thirds of these households are married with children. Like the Prosperous Baby Boomers, this young market has high labor force participation rates and many two-earner families. This group represents family and home-oriented consumerism with an emphasis on outdoor activities.

Young Mobile Adults

This category is marked in the east valley by two subgroups, Twenty-Somethings and College Campuses.

Twenty-Somethings

With over a quarter in their 20s and the median age at 30, this youthful market is busy going to school and starting careers. A majority lives in single-person or shared households. Activities and income reflect their age. They are urban, active, and yet fairly low income.

College Campuses

As the name implies, this is a category of students. The residents are, or will be, well educated. They live in apartments or university housing. Over half of the group is in the labor force, but the jobs are meant to fit with school and are generally part time and low wage. Aside from school costs, funds go to travel and socializing.

City Dwellers

For the east valley community colleges, this category includes Southwestern Families and Low Income: Young & Old.

Southwestern Families

These families reflect the generally Hispanic heritage of the southwest. Spanish is prevalent and households tend to be larger than average. Half of the category has not completed high school. Neighborhoods tend to be very established and in urban areas or smaller cities. Spending is most often on necessities. Television is the most popular media.

Low Income: Young & Old

This component includes those at the far ends of the age scale who are supported by those in the middle. Almost half are single parent or single-person. They tend to be unemployed more than other groups. This component depends on older, more affordable housing often in core urban areas or smaller cities.

Factory and Farm Communities

Young, Frequent Movers are this category's component represented in the east valley service areas.

Young, Frequent Movers

This is a market of diverse young families who are fairly transient. They tend to have low to moderate incomes and are often in semi-rural or farm areas. As consumers, this group may have more loans than savings.

NEW ECONOMY AND THE FUTURE OF WORK

Expect the U.S. economy to slow to three percent growth next year. But the economy will continue to set new records each month for the longest expansion in history, unless some unforeseen shock knocks it off course.

Arizona's Economy, University of Arizona, January 2000

Arizona's Economy

Arizona's economy continues to be remarkably strong, as evidenced by notable job growth, low unemployment, increased retail sales and rising wages. Economists expect Arizona's economy to expand further through 2001 with annual growth of 3.9 percent in 2000 and 3.6 percent in 2001. In contrast, the national economy is estimated to expand by 1.7 percent in 2000 and 1.2 percent in 2001, according to Arizona Department of Economic Security (DES) sources. Considering that Maricopa County's economic activity accounts for more than 60 percent of that in the entire state, the next two years hold promise for this region also¹⁶.

Job Growth

As many as 100,000 jobs were created in the state between February 1999 and February 2000,¹⁷ and job creation is expected to continue at a rapid pace. Over the next two years, the DES Research Administration reports that Arizona will add roughly 164,000 jobs. Arizona's job growth is expected to outpace the national growth rate by two to three times. In a consistent projection, the University of Arizona predicts that over the next 5 years 48,500 jobs will be created annually at an average annual rate of 2.2 percent. Between 2005 and 2010 wage and salary employment in Arizona is expected to grow by 11.7 percent.¹⁸

Low Unemployment Now

Unemployment for the state and local areas ranges from about two percent to slightly over four percent. As shown in Table 14, rates for east valley cities are currently at the low end of the range. Unemployment rates in all east valley cities are below the county average.

Table 14: Local, County, and State Unemployment, February 2000*

	Labor Force	Unemployment Rate
Chandler	71,398	2.0%
Gilbert	22,064	1.8%
Mesa	205,198	2.2%
Queen Creek	1,461	1.6%
Tempe	121,146	2.2%
Maricopa County	1,529,134	2.6%
State of Arizona	2,375,300	3.6%

*Preliminary

Source: Arizona Department of Economic Security Research Administration in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics

This is a strong labor market for anyone who is looking for a job today and skills are the ticket to the future.

U.S. Secretary of Labor Alexis Herman

Increased Retail Sales

In another measure of economic health, Arizona retail sales increased 9 percent in August 1999 (on a 12-month to 12-month basis). After adjusting for inflation, statewide retail sales continue to increase more than 8 percent, the fastest rate of growth since early 1995. Considering the 20-year average increase is 3.2 percent, current retail growth is substantial. Retail sales for the Phoenix metropolitan area are estimated to increase from between 5.5-6.0 percent in the next year.

Rising Wages

Wage growth is a particularly welcome story for the state since Arizona has lagged in that area in recent years. After little or no wage expansion in Arizona during the 1980s, gains became common in the early-to-mid 1990s. As reported in *Arizona Economic Trends*, the state's wage growth was higher than that in the nation between 1994 and 1997. Arizona's wages increased by 13.6 percent in comparison to the national figure of 12.7 percent. The average wage in 1998 in Arizona stood at \$29,264, which was nearly \$1,500 higher than in 1997. DES reported that the state ranked 26th nationally in 1997.

As DES wrote, "By far, the stellar performers have been manufacturing, led by the high-tech sectors, and wholesale trade. Between 1994 and 1998, manufacturing wages increased 25 percent or about 6 percent per year. The average wage in manufacturing in 1997 was \$39,880, ranking Arizona 12th among all states and Washington, D.C., and the state will likely improve its ranking in 1998 when average manufacturing wages grew more than 7 percent to \$42,819. Between 1993 and 1998, the average wage in the semiconductor sector grew by more than 40 percent to about \$65,000."¹⁹ Wholesale wages rose 27 percent to just less than \$40,000 per year.

The University of Arizona's Forecasting Project sees the positive wage trend continuing with an increase in personal income in excess of seven percent for all of 1999, which is significantly higher than the levels reported thus far. The University of Arizona estimates that over the next few years personal income will grow by an average of 5.6 percent annually and will exceed \$150 billion in the year 2004. They also predict that average annual wages will rise at a 3.2 percent annual rate and approach \$36,500 by 2004. Per capita income will rise to over \$28,000, an annual increase of 3.4 percent.²⁰

Growing and Declining Industries

Arizona Trends

The mix of industries in Arizona and the east valley continues to evolve. The Arizona Department of Economic Security identifies growing and declining industries in part to guide job-training programs. The list reflects new areas as well as the goods and services required by a large urban population. Of the 30 growing industries identified in the 3rd quarter of 1999, two are commonly thought of as high tech, namely computer and data processing services (with a projected 3-year job growth of 5,613) and research and testing services (with growth of 1,207 over 3 years). Computer and data processing services ranks 3rd as a growth industry compared to 6th a year ago. Research and testing services is 26th now (23rd during the previous quarter) and

was not on the list a year ago. The 3rd quarter's top five growth areas are listed in Figure 3. Motor vehicles, parts, and supplies, food products, and other common goods and services were some of the areas reported as declining.

Figure 3: Growing Industries, Third Quarter 1999

Rank	Area	3-Year Job Growth
1	Medical doctors' offices/clinics	6,571
2	Hospitals	6,085
3	Computer/Data Processing Services	5,613
4	Grocery Stores	5,299
5	Electrical Work	3,594

Source: Arizona Department of Economic Security²¹

Mining is the only Arizona industry projected to have job losses over the 2000-2001 period. Consolidation and cuts in Arizona's copper mining industry will mean 3,000 fewer high-paying jobs throughout the state. In addition, forecasts show construction activity having peaked as commercial construction declines due to recent high levels of building and home building falls back from its historically high levels.

High Tech and Metro Phoenix

As shown in Table 15, high-tech manufacturing continues to be a metro Phoenix strength. Both high-tech manufacturing and services have grown in recent years, but manufacturing remains twice as large as high-tech services, thanks to a number of large firms. On the other hand, DES Research Administration reports that many small firms provide high-tech services. By the Research Administration's estimates, 97 percent of all high-tech services companies have fewer than 50 employees.²²

Table 15: High Tech Manufacturing and Services in Metro Phoenix, 1988-1998

Sector	1988	1998
High-Tech Manufacturing	5.6%	9.3%
Communications Equipment	0.1%	0.5%
Electronic Components and Accessories	3.9%	7.5%
Measuring and Controlling Devices	0.1%	0.1%
High-Tech Services	3.9%	4.0%
Telecommunications Services	1.7%	1.8%
Computer and Data Processing Services	0.8%	1.0%
Engineering and Architectural Services	1.1%	0.8%
High-Tech Total	9.5%	13.3%

Source: Milken Institute, November 1999

The Milken Institute's widely quoted study of 315 metros, *America's High Tech Economy: Growth, Development, and Risks for Metropolitan Areas*, highlights some of the Phoenix region's strengths and weaknesses in comparison to other cities. For example, the Phoenix region ranks well in high tech overall (12th), but does not compare well in high tech diversity. Phoenix has a high concentration of firms in only one high tech industry, compared to 10 each for San Jose and Orange County.

East Valley Employment

As shown in Table 16, prominent east valley employers include firms in both traditional and newer high-tech sectors. Although the majority of employees continue to work in small firms, large companies and public employers remain vital to the economy and to the health of many smaller supplier businesses.

Table 16: Significant East Valley Employers

City	Employers*	Local Employment
Chandler	Intel	8,500
	Motorola	4,200
	Avnet	880
	Chandler Schools	1,600
	Ryobi Outdoor Products	1,200
	Chandler Regional Medical Center	1,100
	City of Chandler	1,060
	MCI Worldcom	950
Gilbert	InteSys Technologies	1,000
	Earnhardt's Dodge	650
	Casa Blanca Clinic	650
	Dillard's National Bank	450
	Dillard's Distribution Center	320
	Ugly Duckling/Champion Financial	400
	McGee/Walpole	380
	Cerprobe	250
	Spectrum Astro	300
Tokyo Electron AZ	250	
Mesa	Boeing Helicopter Systems	5,300
	At&T Corp—University	3,650
	Lutheran Healthcare Network	3,500
	Motorola Semiconductor	3,100
	TRW Vehicle Safety Systems	3,000
	GM Desert Proving Grounds	1,400
	Excell Agent Services	1,000
	Empire Southwest Machinery	1,100
	Phoenix Newspaper	1,000
	Special Devices Inc.	690
Tempe	America West Airlines	4,000
	Motorola	3,775
	MicroAge	2,700
	Salt River Project	2,175
	Chase Bankcard Services	1,700
	Wells Fargo	1,520
	Allied Signal	1,400
	Federated Stores	1,400
	Medtronic Micro-Rel	1,200
	State Farm Insurance	837

*Information was provided by each city. Some included only private sector employers; others included largest employers regardless of public or private sector.

Source: Greater Phoenix Economic Council *Fact Book*, 1999

As noted, the east valley plays host to a mix of tomorrow's and yesterday's industries. "Old" construction and real estate businesses are well represented in the east valley. For example, of Arizona's top 100 privately held firms, 21 are headquartered in one of the east valley cities. Of these, 13 are in the construction/real estate field with 4 in manufacturing, 2 wholesale, and 1 in retail. (See Appendix A for the firms.) The public companies tell a different story with the 4 of 25 (16%) centered in the east valley being decidedly new economy players and much younger firms. The area is a manufacturing powerhouse with 71 percent of the metro area's largest firms having a significant east valley presence. The east valley is home to about one quarter of the fastest-growing high technology firms and about one third of the largest computer network companies.²³

The recently published *1997 Economic Census*²⁴ provides further detail on the number of information-oriented businesses in the east valley. The description of an information sector is a new feature of the economic census, and it includes firms that produce information and cultural products, those that distribute these products, data, or communications, and those that process data. The specific sectors include: publishing industries including software, motion picture and sound recording industries, broadcasting and telecommunications, information and data processing services. Among east valley cities, Tempe leads in the number of information businesses, followed by Mesa, Chandler, Gilbert, and Queen Creek.

Occupations and Forecasts

Table 17 shows the sectors of the economy and their levels of employment. Not surprisingly considering the population and the importance of tourism, the services sector is the largest. However, this sector also includes high-tech, high-skill professional services. The share of people working in service industries is anticipated to increase both in Arizona and the metro region.

Table 17: Arizona and Phoenix-Mesa Metro Employment, 1998 and 2001

	Arizona 1998 (000s)	Arizona 2001	Arizona 1998 %	Arizona 2001 %	Phx- Mesa 1998	Phx- Mesa 2001	Phx- Mesa 1998 %	Phx- Mesa 2001 %
Total Employment*	2074.7	2324.3	100%	100%	1458.1	1652.6	100%	100%
Manufacturing	216.0	221.5	10%	10%	169.6	173.1	12%	10%
Mining	13.0	10.2	<1%	<1%	5.6	2.9	<1%	<1%
Construction	143.8	164.5	7%	7%	105.4	120.6	7%	7%
TPU**	104.8	116.9	5%	5%	77.3	90.4	5%	5%
Trade	497.9	543.9	24%	23%	353.5	390.4	24%	24%
FIRE***	135.6	148.8	7%	6%	114.0	127.3	7.8%	8%
Services	626.1	756.0	30%	33%	453.3	555.4	31%	34%
Government	337.5	362.6	16%	16%	175.3	192.6	12%	12%

*This refers to nonfarm, wage employment in the state. **TPU refers to telecommunications and public utilities.

***FIRE stands for finance, insurance, and real estate. Percentages may not total 100 due to rounding.

Source: Arizona Department of Economic Security Research Administration

But as Table 18 shows, the occupations with the greatest number of jobs may not be the most desirable ones from either the individual's or the state's point of view. For example, nationally, the average high-tech job's compensation of \$53,000 far outpaces the non-high-tech job at \$30,000.²⁵ Table 18 presents the top jobs in Arizona according to sheer numbers. In today's economy, knowledge-oriented jobs tend to be growing more quickly than the population-driven occupations, but from a smaller base. The knowledge jobs require quite high skill levels and advanced training and knowledge and may be found in a wide variety of industries from software to healthcare. Figure 4 offers a look at some of the fast-growing occupations.

Table 18: Selected Arizona Occupations

Occupational Title	Employment 2006	Rank
Salespersons, Retail	59,935	1
General Office Clerks	47,750	2
General Managers & Top Executives	43,684	3
Marketing/Sales Supervisors	39,269	4
Cashiers	37,225	5
Managers & Administrators, NEC	35,978	6
Janitors & Cleaners	34,351	7
Waiters & Waitresses	31,785	8
Bookkeeping, Accounting, Audit Clerks	31,393	9
Registered Nurses	28,959	10

Source: Arizona Department of Economic Security

Figure 4: Rapidly Growing Occupations

Occupational Title	Annual Rate of Change, 1996-2006
Computer scientists	26.1%
Computer engineers	13.6%
Database administrators	13.5%
Computer support specialists	12.8%
Systems analysts	11.5%
Data processing equipment repairers	15.6%

Source: Arizona Department of Economic Security

The federal Office of Technology Policy estimates that Arizona will have nearly 40,000 information technology (IT) workers in 2006, an increase of 83 percent between 1996 and 2006. Core IT workers share of total employment is anticipated to be 1.4 percent in 2006. Arizona ranked 16th in the number employed in core information technology occupations among the 43 states that prepared employment projections. Phoenix placed 6th in the percent increase of these workers from 1996-2006.

According to the Arizona Software and Internet Association, the number of Internet jobs in the region is growing 13 percent per year. Tempe, home to a new wireless network, is the center. The Arizona Republic, May 7, 2000 from The Economist

What Makes the New Economy New

“New economy” is the latest catch phrase for the fundamental changes taking place in our economy. Thanks to revolutions in technology and communications, and other forces such as globalization, the new economy is reshaping everything from the Circle K on the corner to the largest high-tech firm. Everyone, regardless of where they live and what type of work they do, is feeling—or will feel—its effects. *The New Economy: A Guide for Arizona*²⁶ describes the phenomenon.

8 Reasons It’s a Smaller, Faster, Wealthier World

- Technology is a given.
- Globalism is here to stay.
- Knowledge builds wealth.
- People are the most important raw material.
- There’s no such thing as a smooth ride.
- Competition is relentless.
- Alliances are the way to get things done.
- Place still matters—but for different reasons.²⁷

Arizona and metro Phoenix are characterized in this report as having a number of new economy strengths, such as high-tech manufacturing. However, Arizona lags especially its closest western competitors in such other new economy areas as education and venture capital.

Recommendations for the success of Arizona’s people and places in the new economy call for action in 6 vital areas which offer ample food for thought to anyone concerned with a prosperous future. Notably, the recommendations are not limited to work and technology, but suggest action in a variety of issue areas.

- **Workforce Development: Making the New Economy Work for Everyone**
Give every child a strong beginning.
Focus on more than school funding and choice.
Make academic standards a success.
Increase opportunities for college scholarships and financial help with training.
Put more choice, competition, and information into worker training.
Offer training tax credits or accounts for workers and firms.
- **Work Smarter: Using Technology Wisely**
Foster universal access to broadband telecommunications and encourage advanced services throughout Arizona.
Put more technology know-how in schools.
Set Arizona apart with a bold e-learning initiative.
Add technology transfer to university missions.
Form “new economy transition” partnerships.
Resist the temptation to protect the old economy.
- **Come Together: Strategic Alliances for a Competitive Advantage**

Learn how businesses interact and innovation works.
Support cluster organizations because of their dominance and strategic importance for networking.
Network with the “gazelles” and web-generation entrepreneurs.
Create “cyberdistricts” and vibrant community centers where housing, employment, and services are located together.
Reinforce regional alliances to get things done.

- **Place Matters: Investing in Quality of Place**
Be honest about your assets.
Don't sacrifice quality of place.
Be fast and flexible decision makers.
- **Invest in New Ideas and Knowledge: Research and Development**
Give the state an active role in supporting R& D, especially through university research.
Target world-class scientists and academic researchers for Arizona's universities and institutions.
Focus on centers of excellence at Arizona's universities.
Promote more R&D among private companies.
Encourage and support new economy start-ups.
- **Venture Capital: Show Us the Money**
Diversify the state's high tech base.
Use state programs already on the books.

The Future of Work

We are living in a new economy—powered by technology, fueled by information, and driven by knowledge. And we are entering the new century with opportunity on our side.

Futurework: Trends and Challenges for Work in the 21st Century, U.S. Department of Labor, September 1999

A quality workforce is vital to success in the new economy. As a recent U.S. Department of Labor report points out, the new economy and other forces present three major challenges to work and workers in the first decades of the 21st century. These include:

- The challenge of being **skilled, not stuck** in the new economy—as technology and globalization open more opportunities for those who have access to the tools to build their skills—but reduce the supply of lower-end jobs. Quality jobs today and tomorrow will be part of the new economy. “Population-driven” jobs (like food service managers) return less to the state than “export-driven” jobs such as software or high-tech manufacturing.²⁸ The quality jobs from both the state and the individual's perspective are the high-skill, export-driven, high-value added positions.
- The challenge of **flexibility and family** as employers seek more flexibility to compete in the global marketplace and workers pursue more opportunities to spend time with their loved ones.
- The challenge of **destiny and diversity** as employers hire from a more diverse pool of workers in the future, creating new opportunities for economic growth but also raising the potential for persistent discrimination and inequality.²⁹

With the history-making economic expansion of the 1990s, employers have become increasingly concerned about the quality and quantity of the workforce, young and old, newly recruited and long-term. In general, firms are looking for four types of skills, basic, technical, organizational, and company specific.

- **Basic Skills** are still the three “Rs,” but the tasks that require reading, writing, and computation are increasingly complex in many jobs.
- **Technical Skills** or computer and information technology skills are quickly becoming basic skills. Regardless of the type of work, computers and other technologies are increasingly commonplace.
- **Organizational Skills** are what used to be called “soft” skills, including problem solving, creative thinking, negotiation, and motivation.
- **Company Specific Skills** are those that allow people to acquire new knowledge and skills quickly and to keep their skills at the level of their fast and innovative employers³⁰.

As noted above, employment growth here and throughout the metropolitan area has been robust in recent years. On the flip side of firms’ concerns for workers not having the right skills is the fact that companies must compete for workers like never before. Businesses are fighting to recruit and retain the employees with the right skills and mindset. This is truly a buyers’ market for workers with skills. The hot job market is reportedly drawing public workers, such as teachers and police officers, into the private sector, and making government and nonprofit organizations review their own records as employers. Skilled workers are becoming better “consumers” of jobs, thus reinforcing the competitive nature of recruitment. The Greater Phoenix Economic Council recently released its latest analysis of the metro Phoenix labor market, prepared by The Wadley-Donovan Group.

*Greater Phoenix Labor Market Analysis*³¹ underscores the attention employers must pay to being attractive places to work. The following conclusions from the report also have implications for growth and continuing education.

- The greater Phoenix labor market is tight, but it still offers an ideal opportunity for mid-sized to very large operations seeking experienced, quality employees at costs below those prevailing in most and in many small metropolitan areas.
- Despite its low unemployment rate, greater Phoenix can still provide a high quality labor force to competitive employers. (Over 10,000 graduates annually from area high schools and 18,000 graduates from community

Characteristics of Firms Successful at Recruiting in Metro Phoenix

- High name recognition and positive image
- Excellent benefits
- Promotional opportunities, including training
- Attractive, easily accessible location and positive work environment
- Escalating wage scales to remain competitive with other employers
- Rigorous screening and orientation
- Competitive starting wages
- Flexibility in working hours to accommodate employees

Source: **Greater Phoenix Labor Market Analysis**, May 2000

colleges, technical institutes, and universities are one of the reasons for the area's continuing competitiveness.)

- Competitively positioned employers give high marks to the quality of their employees, reaffirming conclusions in earlier studies that the caliber of greater Phoenix's labor force is well above average.
- Greater Phoenix continues to offer direct payroll savings against the national average.
- Metro Phoenix offers an excellent blend of labor cost and availability for high-end white-collar support and manufacturing operations.
- Greater Phoenix is an extremely attractive location for transfers.³²

LEARNING AND LEARNERS

In effect, a college degree now means what a high school degree used to mean.

Taking Responsibility: Leaders' Expectations of Higher Education, National Center for Public Policy and Higher Education, January 1999

Population Changes

Arizona State University, Maricopa Community Colleges and private schools are creating or expanding campuses in high-growth areas to meet the Valley's escalating demand for higher education. The Valley's demand for student-friendly colleges is driven both by population increases and by adults returning to school to upgrade their skills or change careers.

The Arizona Republic November 28, 1999

The good news for community colleges is that the number of people aged 18 to 24 will rise through the first decades of the 21st century. Also, the number of high school graduates is projected to continue increasing at least through 2008. Hispanics, a rapidly growing portion of Arizona's population, are the fastest-growing student group at community colleges.³³

The "echo" boom or the baby "boomlet" (children born to baby boom parents) has been anticipated by colleges and universities for some time. After declines in the 1960s and 1970s, the number of births began to increase again. The 3.6 million births nationally in 1980 were roughly equivalent to the early years of the baby boom. Those born between 1980-84 and 1985-89 represent the majority of new entrants at colleges and universities in the next decade. In addition to births, the states that have been affected by a combination of immigration, domestic immigration, and large minority populations will probably see the greatest college increases. Arizona is one such state that should experience approximately a two percent average annual increase in college-age populations over the next ten years. As a proportion of the state's births in 1975, an increasingly greater number were born in 1980 (1.26), 1985 (1.50), and 1990 (1.74). Arizona had 262,965 births in 1980-84 and 316,503 in 1985-1989.³⁴

In addition, many adults are returning to school. Nearly one third of community college students are 30 years of age or older. Nearly half are at least twenty-five.

In simplest terms, people who are already highly educated and high achievers increasingly sense that they are not keeping up.

Peter Drucker

Competition

There are many facets to competition. Individuals are feeling it in their jobs, while institutions feel it in attracting students. Competition for students is predicted to escalate even though the number of potential students is increasing, largely due to more educational choices, multiple demands on students' time, and the expectations of the newest students.

- Students have been offered more choice in part because of advances in technology. The Internet and other media have expanded the definition of classroom and campus. The

Western Governors University, a distance-learning institution being supported by many western states, is one example of the phenomenon. Online adult education has become a distinct educational realm that requires different institutional strengths.

- Digitalthink, Learning Tree International, Presofttraining.com, Provant, Skillsoft, Vcampus, and Virtualacademics.com, and Hewlett Packard are just some of the publicly owned companies that are moving into the arena of adult education. Phoenix-based Corpedia Inc. is lining up Peter Drucker and other celebrity teachers, such as Warren Bennis, to provide hours of interactive executive education to individuals and businesses on the Web. As entrepreneur Alexander Brigham said, “education is the biggest industry still fragmented. The growth opportunities are incredible.”³⁵
- Competition is also increasing between traditional institutions and nontraditional providers. Many institutions are expanding into new areas. For example, University of Phoenix and Western International University are now higher education mainstays. But, Lewis University, a Catholic institution based in Illinois, is studying the feasibility of building a new campus in metro Phoenix. Further, the East Valley Institute of Technology, previously a provider of services to secondary students, is expanding to include classes for adults. Figure 5 shows enrollment figures for some of the higher education choices in metro Phoenix.

Figure 5: Higher Education Enrollment in Metro Phoenix, Fall 1999

Maricopa Community Colleges (10 campuses)	102,299
Arizona State University (3 campuses)	50,624
University of Phoenix	22,863
DeVry Institute of Technology	3,506
Ottawa University	3,815
Grand Canyon University	3,140
Universal Technical Institute	2,300
Western International University	2,643
Apollo College	2,500
American Graduate School of Inter. Man.	1,531

Source: Greater Phoenix Economic Council *Fact Book*, 1999

In the metro Phoenix area, competition for the young student is intense. Of particular interest for the community colleges in the east valley is Arizona State University’s strategic initiative to recruit students. ASU has taken steps to improve, expand, and retain its freshmen classes. Community colleges cannot take the traditional student for granted from this point on.

But, community colleges and ASU continue to have a special relationship in terms of transfers.

- In fall 1988, ASU Main reported 41,438 students. Almost 2,500 of these were new transfers. In fall 1998, ASU Main counted 43,732 with 2,890 new transfers. Of these, 3 percent were African-American, 3.1 percent were American Indian, 3.5 percent were Asian American, and 12.8 percent were Hispanic. White students accounted for 73.6 percent of the total. Over the ten-year period, the number of minority transfers increased from 15.2 percent to 22.4

percent.³⁶ Mesa Community College accounts for the greatest number of transfer students. (See Appendix A for exact figures for 1988 and 1998.)

Student Life

Today's students, whether at ASU or a community college, are the first generation to have grown up with computers. Technology is not new to them. It is simply expected to be there. Figure 6 offers a snapshot of technology use.

Figure 6: The Digital Student and the College Market

Total college enrollment in fall 1998—15.5 million

Projected enrollment in fall 2008—16.1 million

Percentage who....

- Surf the Net from a campus computer 84%
- Go online more than once a day 71%
- Made an online purchase in the past year 62%
- Regularly visit entertainment sites 61%
- Regularly visit shopping sites 32%
- Regularly visit travel sites 14%

Source: *American Demographics*, May 2000

In addition, today's students are more likely to be looking for an "experience" than classes. As the authors of *The Experience Economy* note, the most successful enterprises will be those that engage people and offer "education, an escape, entertainment, and the esthetic of being there."

Further students are busier than they have ever been. Nationally, over 60 percent of community college students are part-time students and have many demands on their time. Thirty percent of community college students, who work full time, also attend classes full time. Among students aged 30-39, the rate climbs to 41 percent.

East Valley High Schools and Traditional Students

Arizona has the dubious distinction of having one of the nation's highest dropout rates. The Arizona Department of Education reports that the total high school dropout rate in 1994-95 was 12.1 percent and four years later it still stood at 12.2 percent. While the east valley has long been known for strong schools, the number of students not completing high school remains a concern everywhere. Table 19 presents dropout figures for east valley districts and schools.

Table 19: Grade 9-12 Dropout Rates for East Valley Districts, 1998-99

*The sum of school enrollment may be greater than the district enrollment because the school level formula takes into consideration student migration between schools in the same district. Source: Arizona Department of Education

District/School	District/School Enrollment	District/School Dropout Rate
Chandler Unified	5368	3.9%
Chandler H.S.	3346	3.1%
Hamilton H.S.	2009	2.9%
Pathways L.C.	136	37.5%
Gilbert Unified	7632	2.8%
Alternative Center	63	11.1%
Gilbert H.S.	3293	3.1%
Gilbert Night School	278	15.8%
Highland H.S.	3103	1.7%
Mesquite H.S.	1233	0.8%
Mesa Unified	22,978	5.0%
Brimhall J.H.S.	532	2.4%
Carson J.H.S.	495	2.4%
Dobson H.S.	3388	4.5%
Eagleridge H.S.	84	4.8%
Fremont J.H.S.	626	1.3%
Hendrix J.H.S.	480	0.4%
Kino J.H.S.	533	1.7%
Mesa Homebound	25	8.0%
Mesa H.S.	3110	3.5%
Mesa J.H.S.	413	0.2%
Mesa Vista H.S.	413	0.2%
Mountain View H.S.	3116	2.0%
Poston J.H.S.	558	2.3%
Powell J.H.S.	483	2.1%
Power L.C.	96	9.4%
Red Mountain H.S.	3421	3.9%
Rhodes J.H.S.	492	0.6%
Sharp	22	4.5%
Shepherd J.H.S.	567	0.4%
Stapley J.H.S.	486	0.8%
Sundown H.S.	514	27.6%
Tapp	190	54.7%
Taylor J.H.S.	457	0.0%
Westwood H.S.	2808	7.2%
Tempe Union	14,613	4.5%
Compadre H.S.	454	28.6%
Corona Del Sol H.S.	3074	1.7%
Desert Vista H.S.	2336	0.4%
Marcos de Niza H.S.	2416	3.2%
McClintock H.S.	2320	7.5%
Mountain Pointe H.S.	2617	3.0%
Tempe H.S.	1721	7.6%

CONCLUSION

Taken as a whole, the information presented in *Emerging Trends, Future Directions* suggests:

- The regional and east valley economies will continue to be healthy with a high demand for skilled workers.
- Supporting new economy and high technology businesses will be a top priority.
- Demand for both basic and innovative educational services will be strong, fueled by population growth and shifts and changes in the world of work.
- The time is right to bridge the gap between the haves and have nots because of the strong economy and its demand for high quality workers.
- Increasing livability will be a local watchword.
- Competition among institutions and individuals and choices will continue to mount. Mismatching consumers' and businesses' desires will lead to irrelevance.
- Change will continue to be rapid and dynamic as growth, population shifts, economic changes, and technological advances repeatedly reshape who lives in the east valley, why they are here, what they do, and what type of communities they create.

The east valley and the community college service areas, while similar in many ways, also have distinct personalities and characteristics. As with any large urban area, there are many stories to tell and many viewpoints from which to address the trends. The reality of many ranges, whether from low income to affluent or slow growth to rapid growth, leads back to the major ways in which community colleges relate to their communities, namely as educator-trainers, amenities, and anchors. Clearly, the demand for community colleges as educator-trainers will be there in coming years. But that is not all. The trends point toward the need for community colleges still to shine as amenities and anchors. Planners and leaders will determine the exact significance of this information. Answering such questions as the following may help in that process.

As **educator-trainers**, what do the trends mean for community colleges? What will keep institutions and their programs and services vital?

As **amenities**, what should community colleges do in the future of a growing, diversifying urban area?

As **anchors**, how should community colleges relate to local neighborhoods and their challenges? What does being an anchor stand for in the next decade?

Unlike entities that use environmental scanning to narrow their focus, this report suggests the opposite for community colleges. The strategies needed for community colleges to be successful

in the near future will likely be as diverse and varied as the areas' personalities and the trends to which they must relate. But, the following four directions provide a starting place.

- Connect for Long-Term Growth
- Campaign and Retain
- Retool for the New Economy
- Think Big Cities

◆**Connect for Long-Term Growth**

Whether for students, votes in bond elections, or annual appropriations, community colleges are dependent on strong relationships with residents and leaders. But, that support will no longer come as a matter of course. Community colleges will need to develop and nurture many types of connections or other institutions will take their place.

◆**Campaign and Retain**

Today, it makes sense to both retain the students who have chosen a community college and actively compete for others. This means working to make participation as easy as possible, while ensuring that programs and services are better than the competition's.

◆**Retool for the New Economy**

The many facets of the new economy highlight the need for every institution to reevaluate its services and programs. Is technology a given? Do activities create the skills employers want and provide equity of opportunity? Are the services and programs as responsive as they can be? Is the institution flexible enough to keep up? Do they serve both people and places?

◆**Think Big Cities**

The east valley cities started out as farm communities, but their agricultural heyday (even their small suburb period) is long gone. The realities of urban life cannot be ignored. Size, diversity, churn, and competition make this a critical time to recommit to residents and reframe outlooks.

While tradition alone will not insure a positive future, a history of service is a valuable asset. Community colleges have a significant heritage that provides a foundation for the future and for the strategies and plans that will ensure success for the institutions and their communities.

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- ¹⁵ 1990 U.S. Census. These are the most reliable figures for this topic.
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