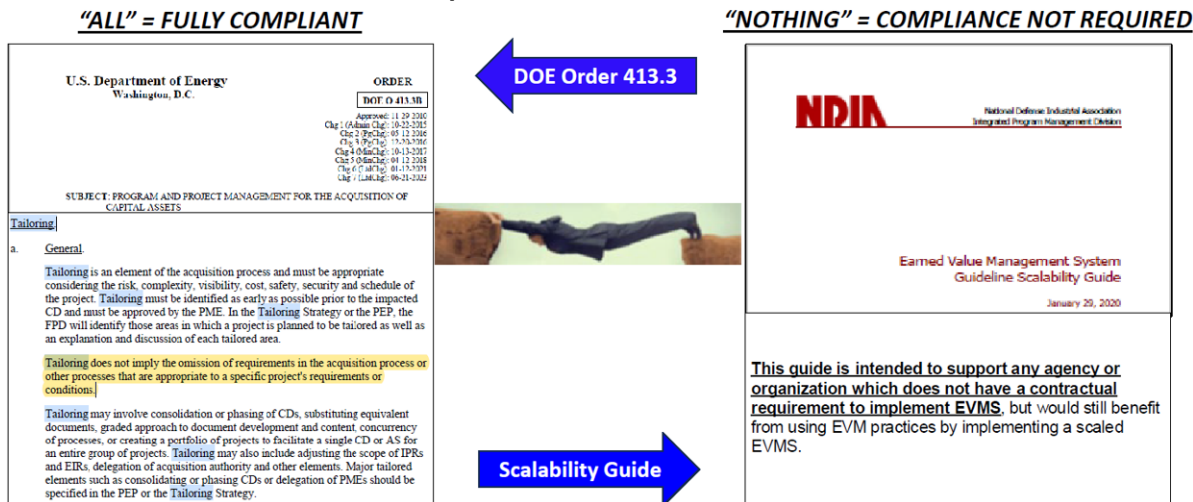# Program/Project/Earned Value Management Optimization - What If?

Past and current practice with respect to Program/Project Management options to earned value certification requirements typically meant and means an "ALL" or "NOTHING" approach. "ALL" is the 413.3 fully compliant approach, which allows for "Tailoring", but without the "omission" of requirements. The "NOTHING" is represented by **the NDIA Earned Value System Scalability Guide approach which is intended for contractors without a contractual EVM certification requirement**. But what about the gap in between?

The "Gap" Between "ALL" or "NOTHING"

Bridging the "GAP" with IP2M METRR "EVMS Optimization"

For the purposes of this article, let's assume that 20% of our total industry scope is Capital Projects managed to the full 413 compliant approach. Likewise, let's all assume that 5% of our scope requires no earned value certification requirements. That means 25% of our scope is categorially defined with respect to earned value requirements. This leaves 75% of our scope in the compliance "Gap" untethered to discernable, well defined earned value requirements, creating significant grey area of uncertainty for our DOE Clients, stakeholders, and contractors alike.
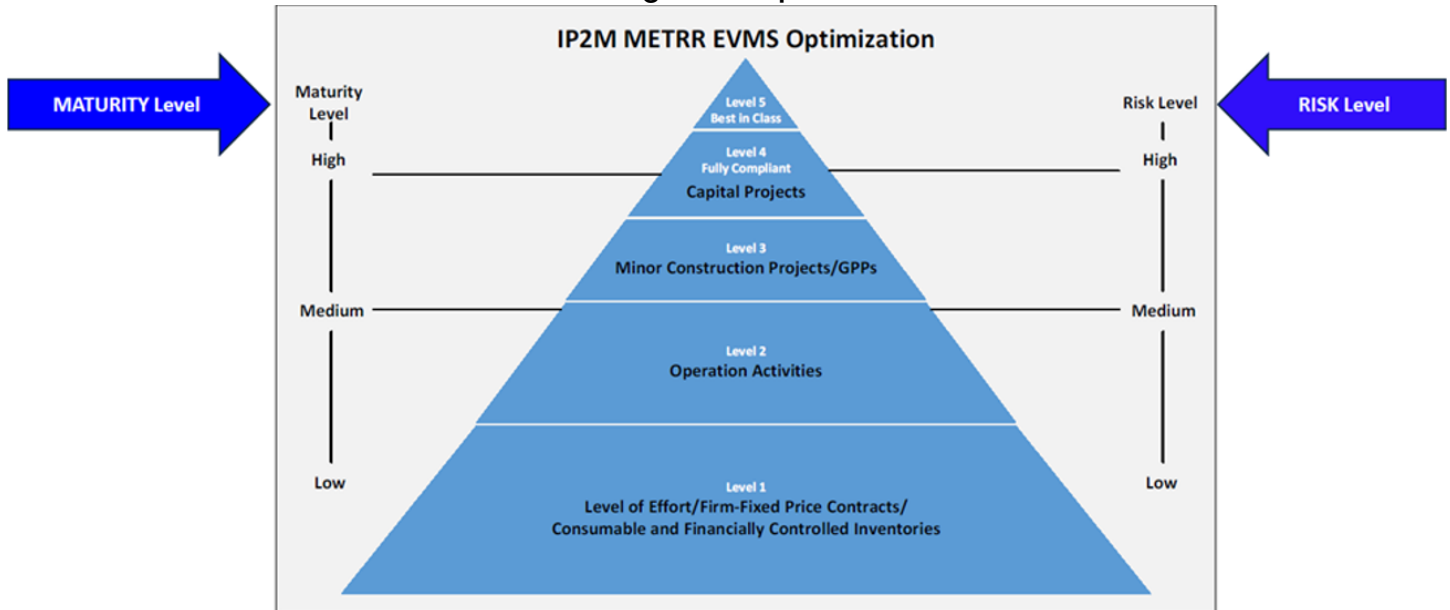
What If?

Rather than accept the grey area of uncertainty impacting 75% of our scope, what if DOE and contractors collaboratively used the existing PM-30 IP2M METRR as a basis to selectively identify by "Attribute", "Checkpoint", "Effectiveness Criteria" and "Maturity Level" as applied to the various scope types as shown in the pyramid illustration "Visualizing "EVMS Optimization" below.

What If?

Continued from previous page

Visualizing "EVMS Optimization"

Again, based on the scope type, and the "Risk Level", DOE Acquisition and Contracting Officers could work with their program offices to determine the optimized level of earned value based on the existing, sanctioned certification process currently used by DOE PM-30. Essentially, IP2M METRR becomes a customizable drop-down menu for program authorities to specifically identify and implement the appropriate level of earned value expectations for each contract. This approach also effectively provides a fundamentally sound process for contractor self-governance, which can easily demonstrated.

COMPLIANCE OPTIMIZED BASED ON SCOPE CATEGORIZATION AND CUSTOMER/CONTRACT REQUIREMNTS

- Levels 1 thru 5
- Level 4 fully compliant with 413.3B, Level 5 is Best in Class
- Sanctioned process currently in use
- Agency/Field Office CO could select level of compliance for each attribute
- Allows the 413.3B "Tailoring" and NDIA "Scalability" to remain in-tact
- Allows DOE to selectively invest precious resources based on the type of scope to be performed
- Supports reciprocity as it is easily adaptable by all agencies
- Could be implemented through self-certification with PM-30 oversight
- Minimal guidance required (add a section to the CAG) to implement

What If?

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EVMS Optimization through IP2M METRR provides a consistent, sustainable, and fully customizable approach that is also Current, Accurate, Complete, Repeatable, Auditable, and Compliant (CACRAC), in the execution of the 75% of our scope that is currently in the "Gap."

IP2M METRR - EVMS Optimization Process

- Excludes Capital Projects (because full-up compliance is required, even if "Tailoring" is applied)

- Non-Capital scope is assessed by the DOE Site Customer to determine which of the 27 Environmental Factors and 56 Maturity Attributes, to determine which factors and attributes should be applied to the contract scope, based on the scope, contract type, and added value to the project

- The "EVMS Optimization Process" can and should be applied categorically to:
  - Minor Construction Projects/GPPs
  - Operational Activities

- Contractor could also consider applying by Task Oder for IDIQ Contracts

LOW	MEDIUM			HIGH
1	2	3	4	5
Not yet started.	A singular, high-level product-oriented WBS is established. The WBS does not decompose to capture all work requirements.	Processes to require a singular, product-oriented WBS are established. The WBS is traceable and decomposed to the appropriate levels for effective project management. The WBS includes most of the authorized work scope and requirements.	Processes requiring a singular, product-oriented WBS are established and approved. The WBS is traceable, encompassing all authorized work, and decomposed to the appropriate levels for effective project management and external reporting. The required WBS is annually validated through internal checks per approved processes.	The singular product-oriented WBS is reviewed, revised, and validated annually (or more frequently as needed) with revision history, per approved processes, through in-process internal checks.
	The process to establish a singular, product-oriented WBS has started but is not documented. The hierarchical WBS is not fully traceable to the SOW and is missing the SOW scope. The WBS is functionally oriented and lacks product orientation. Products often do not fulfill project requirements.	The process to establish a singular, product-oriented WBS that accurately reflects the products, services, and deliverables required to complete the project has been developed. No internal checks are in place to validate that the WBS meets requirements. Most products fulfill project requirements. The WBS hierarchy initially is product-oriented, but when extended to lower levels, the WBS becomes functionally oriented in an organizational or functional orientation. The WBS is coordinated with the planning and scheduling, budgeting and work authorization, change control, accounting consideration, and analysis and management reporting subprocesses.	(A.1.1) The process to establish a singular, product-oriented WBS that accurately reflects the products, services, and deliverables required to complete the project has been developed, documented, and approved. (A.1.2) Internal checks are in place to validate that the WBS meets project requirements. These checks may be outside the WBS process flow. The project ensures that the WBS is verified as product-oriented, and corrections are performed as required during project start-up. Products fulfill all project requirements. If required, WBS descriptive documents, such as a WBS dictionary, index, or similar, have been developed. (A.1.3) The WBS is integrated with the planning and scheduling, budgeting and work authorization, change control, accounting considerations, and analysis and management reporting subprocesses.	The WBS is optimized to streamline the management of the project. Internal checks are in place to validate that the WBS meets project requirements within the WBS process flow. Automated testing ensures that a product-oriented hierarchical decomposition of hardware, software, and services. Necessary corrective actions are implemented, completed, and recurring issues resolved. Routine surveillance results of the WBS are fully disclosed to all key stakeholders, who maximize their use. The WBS is continuously improved and optimized.

About IP2M METRR

"There are many approaches to implementing an EVMS or similar performance-based management system (such as an alternative project control method), including the application of formal, mature systems and robust processes or more informal, less mature systems and processes. Selecting the right approach can mean the difference between project success and failure. Once an approach has been selected, the project team prepares a holistic plan to assess the effectiveness of the EVMS, including frequent and comprehensive surveillance to garner information needed to improve its use."

Source: Office of Project Management (PM) Earned Value Management Systems (EVMS) Compliance Review Standard Operating Procedure (ECRSOP) Appendix A Compliance Assessment Governance (CAG) 2.0. To learn more about the ECRSOP CAG visit **PM ECRSOP Appendices - Dept of Energy-External - Community.**

Is your data and info Current, Accurate, Complete, Repeatable, Auditable and Compliant©?

What If?

Continued from previous page

1. Identifies the EVMS subprocess.
2. Identifies the attribute that is part of a larger subprocess.
3. Describes the attribute's essential characteristics.
4. Identifies the attribute's maturity ranges from low, (1) not yet started, to high (5) optimized use.
5. Summarizes the maturity at each level to allow for a quick bracketing of the attribute's maturity during an assessment.
6. Explains each maturity level in greater detail...individual effectiveness criteria (EC) used to define and substantiate the attribute's overall objective.

IP2M METRR Maturity Scoring

- Each attribute is assessed on a 1-to-5 maturity scale: "1" means that work on this attribute has not yet started, and "5" means best in class
- Attributes that are mature enough for an EIA-748– compliant EVMS receive a maturity level of "4"
- Those that are not yet mature receive scores of "2" or "3"
- Definitions of the maturity levels (1 through 5) are additive, meaning that level 5 includes everything in level 4, level 4 already includes everything in level 3, and so on
- Attributes deemed not applicable (N/A) for the project/program under consideration are marked "N/A" and do not affect the final maturity score

Benefits of Using IP2M METRR for "EVMS Optimization"

- Projects can gauge the efficacy of their management methods and practices in achieving optimum performance and desired outcomes
- IP2M METRR helps projects identify the various ways the environment and implementation maturity interact and interdepend to facilitate decision-making, problem-solving, and continuous process improvements
- Reviewers can easily depict the relationship of the project's environment to the maturity of the EVMS
- A strong positive correlation exists between environment and maturity, in which both move in the same direction and the project environment is dominant
- The better the environment, the higher the maturity, and of course the opposite is true

IP2M METRR "EVMS Optimization" Conclusions

EVMS Optimization:
- Bridges the gap between "All" or "Nothing" compliance requirements
- Allows flexibility to implement by:
  - Contract Type
  - IDIQ Task
  - Scope Type
    - Capital Projects
    - Minor Construction/GPPs
    - Non-Capital Operational Activities

Concludes on next page

What If?

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- Aligns Maturity Level with Risk Level
- Provides a solid self-governance platform

IP2M METRR "EVMS Optimization" Recommendations
- Socialize the "EVMS Optimization" approach with the management team and the DOE customer
- Socialize the "EVMS Optimization" approach with the EVMS certifying authority
- Consider the "EVMS Optimization" approach when updating the Earned Value Management System Description
- Form a core group of project integration/controls to assess the probability from an operational perspective
- Request a "Feasibility" report-out from the core team
- Make an informed decision based on the collective data available

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It Is Not One World
Mobile Crane Super Fails

As a reminder the theme behind "It's Not one World" is predicated on the common belief that U.S. industry is heavily over regulated. But when we put eyes on what goes on around the world in similar industry applications we see why and how appropriate regulation can keep us going home safely after each workday.
This month's installment comes to us with compliments from Ed Davidson LinkedIn Post. Ed Writes: "There ya have it...Crane fails...A significant portion of crane failures can be attributed to poor planning, as inadequate pre-lift assessments, improper load calculations, and not considering site conditions can lead to accidents like overturning, structural failure, or collisions, highlighting the importance of thorough planning before any crane operation." **See this link to watch Mobile Crane Super Fails**

Mobile Crane Super Fails

> " Every project is an opportunity to learn, to figure out problems and challenges, to invent and reinvent.
>
> – David Rockwell

PM ProjectManager

Just for Fun: March's Notable Events and Famous Birthdays

Notable Events

1 — The Salem witch hunt began (1692), the Articles of Confederation were ratified (1781), Yellowstone National Park was established (1872), and **the Peace Corps was established** (1961).

2 — Congress abolished the African slave trade (1807), Texas declared its independence from Mexico (1836), and Wilt Chamberlain scored an NBA-record 100 points in a game (1962).

3 — Congress passed the Missouri Compromise (1820), the first U.S. wartime draft was approved (1863), and "The Star-Spangled Banner" officially became America's national anthem (1931).

4 — The first session of the U.S. Congress was held (1789), and comedian John Candy died (1994).

5 — The Boston Massacre took place (1770), Soviet leader Joseph Stalin died (1953), and the Hula-Hoop was patented (1963)

6 — The Battle of the Alamo ended (1836), the Dred Scott case was decided (1857), and aspirin was patented (1899).

7 — Alexander Graham Bell patented the telephone (1876), and Hitler sent troops to the Rhineland in violation of the Treaty of Versailles (1936).

8 — The first U.S. Marines arrived in Vietnam (1965), Joe Frazier beat Muhammad Ali in the "Fight of the Century" (1971), *Beavis and Butthead* premiered on MTV (1993), and a Malaysia Airlines jet vanished with more than 200 people aboard (2014).

9 — The Barbie doll debuted (1959), the first Adopt-a-Highway sign appeared (1985), comedian George Burns died (1996), and rapper The Notorious B.I.G. was killed (1997).

10 — The telephone first transmitted speech (1876).

11 — The Army Corps of Engineers was established (1779), the Confederate constitution was adopted (1861), the first cases of the flu pandemic were reported (1918), and Paul McCartney was knighted (1997), the Fukushima nuclear disaster in Japan occurred (2011), and the World Health Organization officially declared the COVID-19 outbreak as a pandemic (2020).

12 — FDR's first "fireside chat" was broadcast (1933), Germany annexed Austria (1938), and Janet Reno became the first female attorney general (1993).

13 — The planet Uranus was discovered (1781), President Andrew Johnson's impeachment trial began (1868), and the Army established its K-9 Corps (1942).

14 — 22 members of the U.S. boxing team were killed in a plane crash (1980)

15 — Roman emperor Julius Caesar was murdered (44 BC), Maine became a state (1820), Bobby Orr became the first NHL defenseman to score 100 points in a season (1970), and *The Godfather* opened in theaters (1972).

16 — The U.S. Military Academy was established (1802), and the first liquid-fueled rocket was successfully launched (1926).

17 — St. Patrick died (461), and the British evacuated Boston (1776).

18 — Wells Fargo was established (1852), a natural gas explosion at a Texas school killed nearly 300 students (1937), and the War Relocation Authority was established (1942).

19 — The first U.S. air combat mission was flown in World War I (1916), Nevada legalized gambling (1931), the Academy Awards were first shown on TV (1953), and Operation Iraqi Freedom began (2003).

20 — The Black Death plague broke out in Europe (1345), the Republican Party was formed (1854), and terrorists attacked a Tokyo subway with nerve gas (1995).

21 — The first rock concert was held (1952), Alcatraz Prison closed (1963), the Alabama Freedom March began (1965), and the U.S. announced its boycott of the Summer Olympics (1980).

22 — The Stamp Act was imposed on the American colonies (1765), the first Stanley Cup championship was played (1894), **the Equal Rights Amendment was passed by the Senate** (1972), and a mudslide at Oso, Wash., killed 43 people (2014).

23 — Lewis & Clark began their journey back to the Midwest from the Pacific Coast (1806), and the Fascist party was founded (1919).

24 — Elvis Presley was inducted into the Army (1958), football star Payton Manning was born (1976), the Exxon *Valdez* ran aground in Alaska and spilled 11 million gallons of oil (1989), astronaut Shannon Lucid became the first woman to live in a space station (1996), and a school shooting in Jonesboro, Ark., killed five people (1998).

25 — A fire in the Triangle Shirtwaist factory killed 146 workers (1911), the European Economic Community was founded (1957), and the last U.S. troops departed Somalia (1994).

26 — The polio vaccine was announced (1953), and a peace agreement between Israel and Egypt was signed (1979).

27 — Oregon beat Ohio State to win the first ever NCAA men's basketball tournament (1939), Nikita Khrushchev became premier of the Soviet Union (1958), and the FDA approved Viagra (1998).

28 — San Francisco was founded (1776), General/President Dwight D. Eisenhower died (1969), the Three Mile Island nuclear disaster occurred (1979), and the Baltimore Colts moved to Indianapolis (1984).

29 — The last U.S. combat troops departed from Vietnam (1973), and *Mariner 10* became the first space probe to land on Mars (1974).

30 — The U.S. bought Alaska from Russia (1867), the 15th Amendment granting African-American men the right to vote was adopted (1870), and President Ronald Reagan was shot (1981).

31 — The Eiffel Tower opened (1889), the longest major league baseball strike ended (1995), and *The Matrix* opened in theaters (1999).

Birthdays

1 — Bandleader Glenn Miller (1904), NFL commissioner Pete Rozelle (1926), actor/director Ron Howard (1954), and pop superstar Justin Bieber (1994)

2 — Author Dr. Seuss (1904), singer Karen Carpenter (1960), rocker Jon Bon Jovi (1962), and actor Daniel Craig (1968)

3 — Inventor Alexander Graham Bell (1847) and Olympic gold medal track star Jackie Joiner-Kersee (1962)

4 — Football pioneer Knute Rockne (1888)

5 — Actor Dean Stockwell (1936) and singer Andy Gibb (1958)

6 — Painter Michelangelo (1475), TV announcer Ed McMahon (1923), Fed chairman Alan Greenspan (1926), actor/director Rob Reiner (1947), actor Tom Arnold (1959), and basketball star Shaquille O'Neal (1972)

7 — TV weatherman Willard Scott (1934) and tennis Hall of Famer Ivan Lendl (1960)

8 — Singer Mickey Dolenz (1945) and TV newsman Lester Holt (1959)

9 — Cosmonaut Yuri Gagarin (1934), **chess wizard Bobby Fischer** (1943), and actor Emmanuel Lewis (1971)

10 — Tough guy Chuck Norris (1940), former Al-Queda leader Osama Bin Laden (1954), actress Sharon Stone (1958), and singer Carrie Underwood (1983)

11 — Bandleader Lawrence Welk (1903), and TV newsman Sam Donaldson (1934)

12 — Astronaut Wally Schirra (1923), actress Barbara Feldon (1941), singers Liza Minelli (1946) and James Taylor (1948), and baseball star Darryl Strawberry (1962)

13 — Scientology founder L. Ron Hubbard (1911) and singer Neil Sedaka (1939)

14 — Albert Einstein (1879), actor Michael Caine (1933), and actor/comedian Billy Crystal (1948)

15 — 7th U.S. President Andrew Jackson (1767), Supreme Court Justice Ruth Bader Ginsburg (1933), actor Judd Hirsch (1935), model Fabio (1961), and actress Eva Longoria (1975)

16 — 4th U.S. President James Madison (1751), actor/comedian Jerry Lewis (1926), and actor Erik Estrada (1949)

17— Golf Hall of Famer Bobby Jones (1902), **singer Nat King Cole** (1919), actors Patrick Duffy (1949), Kurt Russell (1951) and Rob Lowe (1964)

18 — 22nd and 24th U.S. President Grover Cleveland (1837), British Prime Minister Neville Chamberlain (1869), actor Peter Graves (1926), singers Charley Pride (1939) and Wilson Pickett (1941), actress Vanessa Williams (1963), Olympic gold medal speed skater Bonnie Blair (1964) and rapper/actress Queen Latifah (1970)

19 — Lawman Wyatt Earp (1848), cowboy artist Charles Russell (1864), Supreme Court Justice Earl Warren (1891), actress Glenn Close (1947), and actor Bruce Willis (1955)

20 — French Emperor Napoleon Bonaparte II (1811), TV's Mr. (Fred) Rogers (1928), actor Hal Linden (1931), hockey Hall of Famer Bobby Orr (1948), and filmmaker Spike Lee (1957)

21 — Composer Johann Sebastian Bach (1685), and actor Matthew Broderick and TV personality Rosie O'Donnell (1962)

22 — Actor Karl Malden (1913), **mime Marcel Marceau** (1923), actor William Shatner (1931), singer George Benson (1943), musical composer Andrew Lloyd Webber (1948), sportscaster Bob Costas (1952), actor Matthew Modine (1959), and actress Reese Witherspoon (1976)

23 — Actress Joan Crawford (1904), comedian Louie Anderson (1953), and singer Chaka Khan (1953)

24 — Magician Harry Houdini (1874), actor Steve McQueen (1930), actor Jim Parsons (1973), and football Hall of Famer Payton Manning (1976)

25 — Sportscaster Howard Cosell (1918), feminist Gloria Steinem (1934), singers Aretha Franklin (1942) and Elton John (1947), actress Sarah Jessica Parker (1965), and race car driver Danica Patrick (1982)

26 — Poet Robert Frost (1874), Supreme Court Justice Sandra Day O'Connor (1930), actors Leonard Nimoy (1931), Alan Arkin (1934) and James Caan (1939), politician Nancy Polosi (1940), singer Diana Ross (1944), comedian Martin Short (1950), **football Hall of Famer Marcus Allen** (1960) and basketball Hall of Famer John Stockton (1962)

27 — Racing legend Cale Yarborough (1940), director Quentin Tarantino (1963) and singer Mariah Carey (1970)

28 — Actor Ken Howard (1944), and singers Reba McEntire (1955) and Lady Gaga (1986)

29 — 10th U.S. President John Tyler (1790), baseball Hall of Famer Cy Young (1867), basketball Hall of Famer Walt Frazier (1945), and football Hall of Famer Earl Campbell (1955), supermodel Elle MacPherson (1964), actress Lucy Lawless (1968), and tennis Hall of Famer Jennifer Capriati (1976)

30 — Artist Vincent Van Gogh (1853), **actor Warren Beatty** (1937), guitarist Eric Clapton (1945), actor Paul Reiser (1957), rapper M.C. Hammer (1962), and singer Celine Dion (1968)

31 — Composer Franz Haydn (1732), hockey Hall of Famer Gordie Howe (1928), musician Herb Alpert (1935), actor Christopher Walken (1943), and former vice-president Al Gore and actress Rhea Perlman (1948)