Legal Cannabis and its Innovation Dynamics

CleanTech Forum 2018

David Donnan, Sr. Partner A.T. Kearney
US legal Marijuana predicted to grow at 28% CAGR through 2021

The US legal market was $8bn in 2017, and is projected to grow rapidly in 2018.

**State-Legal Market: $8bn**
- **California** $3.2bn
- **Oregon** $0.9bn
- **Washington** $0.5bn
- **Colorado** $1.5bn
- **Other States** $1.9bn

**RMJ Total Market: $45-$50bn**
- **Beer** $106bn
- **Cigarettes** $77bn
- **RMJ (including illegal)** $45-$50bn
- **Movie Tickets** $11bn
- **Ice Cream** $5bn
- **Doritos, Cheetos, Funyuns** $5bn
- **Frozen Pizza** $4bn
- **Music Streaming Services** $3bn
- **Tequila** $2bn
- **Girl Scout Cookies** $1bn

**Source:** A.T. Kearney, Ackrell Capital, LLC 2018 Global Cannabis Consumers, MJBizDaily Annual Report
Aggregate public support is now >60%

**US Public Opinion:**
“Do you think the use of Marijuana should be made legal, or not?” - % Yes, legal

Source: A.T. Kearney, Ackrell Capital, LLC 2018 Global Cannabis Consumers, Gallup Marijuana Public Opinion Polling Data
And gaining state-wide support

State-level legalization trend (’96-’18)

1996

2004

2008

2012

2014

2018

Recreational Law

Medical Law

CBD/Limited Law

Source: A.T. Kearney, Ackrell Capital, LLC 2018 Global Cannabis Consumers
Many segments are needed to support the industry

Cannabis Industry Segments

- **Production**
  - Cultivation
  - Production Equipment and Supplies
  - Production and Testing Services

- **Business Solutions**
  - Business Software
  - Business Services

- **Distribution**
  - Dispensaries
  - E-Commerce
  - Distribution Services

- **Digital Media**
  - Online Content and Networking
  - Online Directories

- **Consumer Products**
  - Flower
  - Concentrates
  - Infused Products
  - Vaporizers and Accessories
  - Pharmaceuticals

Involves Touching the Plant

Does not involve touching the plant

Source: A.T. Kearney, Ackrell Capital, LLC 2018 Global Cannabis Consumers
Companies are trying to enter the market faster than government can license them.

MJ Value Chain and Select Players

1. **Producer**
   - **Wholesale Cultivator**
     - Select Examples
     - Aurora
     - Canopy
     - GrowHealthy
     - CopperState Farms
     - Cannafarms
   - Illegal Operations

2. **Processor**
   - **Infused Product Manufacturer**
     - Select Examples
     - GW
     - Cura
     - x-tracked

3. **Distributor**
   - **Distributor**
     - Select Examples
     - Canopy
     - White Palm
     - Ganja Express

4. **Retailer**
   - **RMJ Stores and MMJ Dispensaries**
     - Select Examples
     - Toronto Cannabis Dispensaries
     - Buds2Go.ca
     - Organa Brands
     - Native Roots

Note: Many players are vertically integrated across the value chain.
Source: Growersnetwork.com, company sites
Market valuations have been explosive

Value of $100 investment
(1 year trailing returns as of 1/17/2018)

Market Cap ($bn)
COB 1/17/2017

Aurora
(ACB.TO)
$5.5bn

Canopy Growth
(WEE.D.TO)
$7.1bn

MedReleaf
(LEAF.TO)
$2.3bn

GW Pharmaceuticals
(GWPH)
$3.7bn

Source: A.T. Kearney, Yahoo Finance
New product innovations are expected
A variety of energy applications

**Proportion of Energy Consumption by End Use**
(Indoor Marijuana Cultivation)

- **Lighting**: 38%
- **Air Conditioning**: 21%
- **Venting & Dehumidifier**: 30%
- **CO2 Injection**: 2%
- **Space Heat**: 5%
- **Water**: 3%
- **Drying**: 1%

Source: A.T. Kearney, Ackrell Capital, LLC 2018 Global Cannabis Consumers